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with which is combined Operation & Maintenance

Reg. U. S. Pat. Off.

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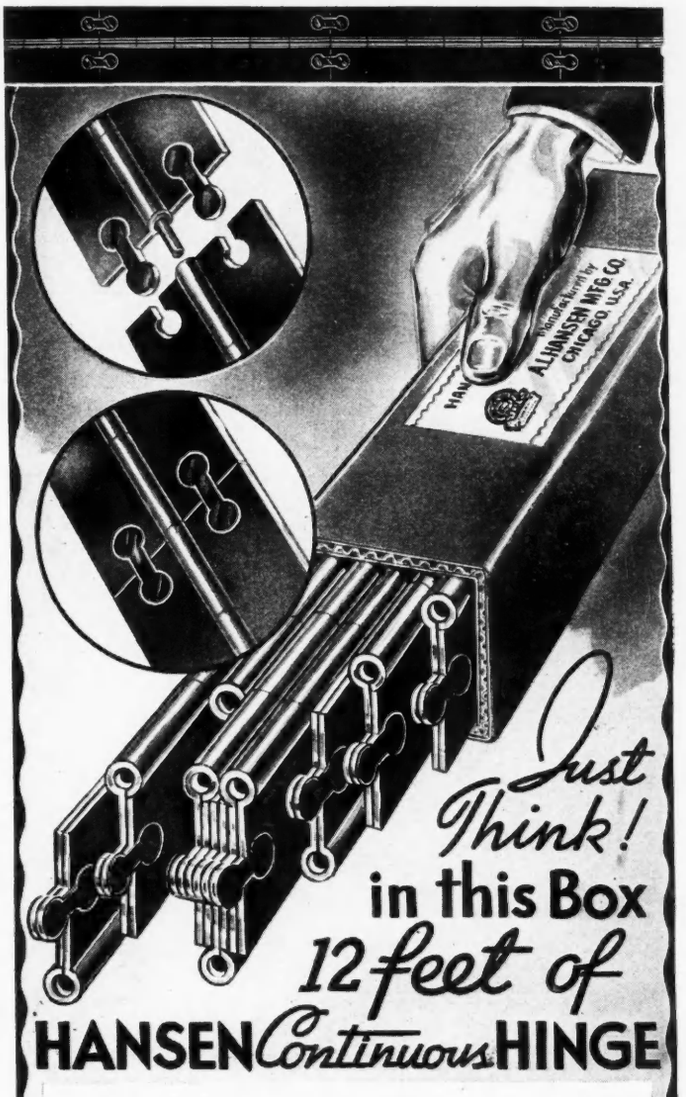

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MEET

The MacDougald fleet of Chevrolet Trucks is lubricated with New Texaco Motor Oil, Marfak, and Thuban; fueled with Fire-Chief.

Texaco Marfak is the ideal lubricant for wheel bearings, shackles, grease-type universal joints, steering connections, and all chassis parts. Marfak stays put, clings, protects parts from road shocks, water, and grit.

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TEXACO

REG. T. M.

TEXACO

COMMERCIAL CAR JOURNAL
VOL. LV, NO. 5 JULY, 1938

CCJ QUIZ

Before you start working on this fourth edition of the Commercial Car Journal Quiz series, let us remind you that the offer still holds: a dollar for each question accepted. Five questions rate $5 and if you get a whole series accepted, it's worth $10. Why not try your hand in stumping fellow readers?

Now, with pencil sharpened check the answers you believe correct. You get ten points for each correct answer and a score of 60 this month rates fair.

So far the Hundred Club is too exclusive. If you make the grade, a perfect score, send in your name for honorary mention.

Correct answers on page 52

1. If the truck hauling the June COMMERCIAL CAR JOURNAL to the post office broke down (God forbid) and you got a hurry call to transfer the load so as to make the midnight post office closing, you would rush to the scene of our misfortune with a truck capable of carrying:
11,000 lb. *4,000 lb.*
18,500 lb. *33,000 lb.*

2. If you wanted to make some money, you would bet the shop foreman that a piston travels
Faster on the upper half of its stroke than on the lower half
Slower on the upper half of its stroke than on the lower half
Same speed for entire stroke

3. Suppose you were invited to a testimonial dinner to the man who was responsible for the development of the self starter. You would expect the guest of honor to be
Vincent Bendix *Robert Benchley*
W. C. Durant *C. F. Kettering*

4. If you came across the unlabelled formula $\frac{RPM \times R}{168 \times FGR}$ in your desk you would know immediately that the answer it gives you is
MPH *Piston displacement*
AMA horsepower
Depreciation rate (NRA code)

5. If you wanted to impress fellow Rotarians with the size of your industry, you would say in your luncheon speech that there are operating nine or more vehicles
2,500 operators *25,000 operators*
1 million operators
1 hundred thousand operators

6. If you got a letter from one of your customers that began "In compliance with Section 77B——" you would think without reading further that your customer had
Violated ICC regulations
Gone bankrupt
Been deported
Closed for inventory

7. If an applicant for a driving job wrote on the line for information on present employment "batting out" you would, rather than ask one of your drivers, surmise that he was
Acting as a helper
Waiting until a suspended license was restored
Taking it easy
Working on the extra list at the union hall

8. The model T Ford is the most famous automobile model and still the chances are that you do not know it was called the model T because
T—stood for Terry, then chief engineer of Ford Motor Co.
T—was the next letter in the alphabet for the sequence of models
T—because no other manufacturer had a model T in 1908
T—because the car had a Tee head engine

9. If you had attended the summer meeting of the Society of Automotive Engineers and the president was announced as a speaker, you would have seen come to the platform
Harry T. Woolson *Abraham Strauss*
C. W. Spicer *John A. C. Warner*
Col. Roscoe Turner *Alfred E. Reeves*

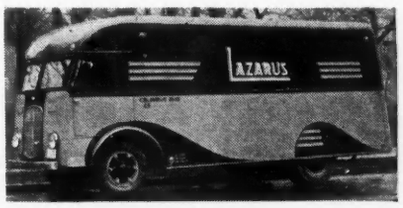
10. The various viscosities of engine oil—10, 20, 30, 40, 50, 60—are determined by standards set by the
U. S. Bureau of Standards
American Petroleum Institute
Society of Automotive Engineers
Act of Congress (1917)

THE OVER LOAD

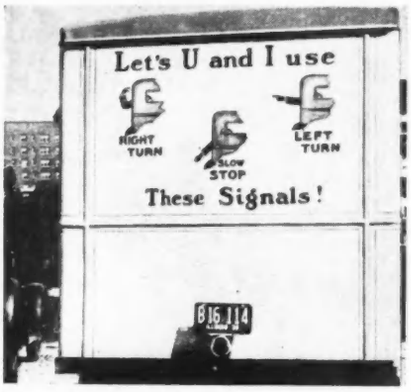
Yen for Lead

The Ethyl Corp. has just come up with the results of a survey on fuels that includes 5821 answers from truck fleets. One intriguing paragraph on page 3 tells its own story. "In purely commercial fleets such as trucking, package delivery, grocery and bakery delivery, etc., it is surprising to note the large percentage of regular fuels being used. Approximately 80 per cent of all fuel purchased by this group is 70 octane leaded fuel with 9 per cent 70 octane non-leaded fuel and 8 per cent third grade fuel of 65 octane number."

Not a replacement but merely an addition to the Mainland Transfer fleet is the new Federal. The 19-year-old model is going strong a little hard, perhaps, on Vancouver streets



When a customer buys a piece of furniture from F & R Lazarus & Co., Columbus, Ohio, he usually stays home for the moment when the streamlined Mack rolls up to his door



Campaigning for uniformity of traffic signals, a number of Borden-Wieland trucks carry this special paint job. Every Chicago milk route has been covered at least once

AFTER HOURS

EDITORIAL COMMENT BY GEORGE T. HOOK

...THE LONG PULL STRATEGY OF THE RAILROADS

THE other day a writer for one of the big national monthly magazines wrote us to ask this question:

"Would you say that the present set up of Interstate Commerce Commission regulation of rail and motor carriers constitutes, in effect, a sort of apportionment body for apportioning classes of business to the agency best suited to the class of traffic? I mean by this, would not the fact that I.C.C. certificates must be issued more or less curb competition to the extent that certificates would be granted only to the agency best suited to the traffic and thus avoid a lot of unnecessary competition and guarantee some degree of safety to the agency authorized for a particular route or class of traffic?"

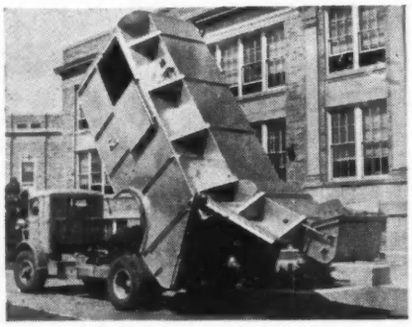
If you had looked over our shoulder as we penned a reply, you would have read this:

Casual consideration of the matter may lead to the conclusion that the eventual effect of I.C.C. regulation of rail and motor carriers will be to distribute traffic in such a way that each agency will get the business it is capable of handling most economically. It is even possible that such an eventuality is more than a hope in the bosoms of some commissioners. While he was Federal Coordinator of Transportation, Commissioner Eastman had the idea searchingiy analyzed in one of his voluminous reports. This report argued that 150 miles seemed to be the economic limit of trucks.

Thorough consideration of the matter, however, will develop the conviction that there is nothing in the I.C.C.'s method of administering the Motor Carrier Act to indicate that economic apportionment of traffic is a definite goal. The Commission, of course, is much too busy with minor details, with interpretation of the law, with a chaotic rate situation and with the huge task of certifying the rights of carriers under the grandfather clause of the Act, to give any consideration to any such long-range plan as traffic apportionment. But even if the Commission were not

So You See

Addressing the Michigan State-Wide Safety Conference, a Detroit cop stated that the habit of grabbing a cup of coffee and a hot dog was a bad habit for a truck driver because it did not replace a balanced meal and that most cases of sight trouble among truck drivers could be traced to bad diet. That seems to be taking in quite a bit of territory since the cup of coffee and sandwich is as old an institution as trucking. Incidentally the idea that most eyesight trouble is mostly due to diet is a little hard to take purely on the authority of the police department.



New York City handles garbage in a big way. By means of the Autocar dual-power take-off the driver can operate the loading conveyor, tail gate, hoist or snow plow from the cab

EARS TO THE GROUND

Internal Intrigue

There is dissension in the ranks of this department which threaten to split it asunder. Agents who for years have rendered reports from widely separated sources that dovetailed nicely and permitted accurate prognostications by headquarters are now dispatching conflicting ideas. The difference of opinion seems to be principally whether or not there will be any revolutionary changes in the 1939 cars. The rift will be patched up in gentlemanly fashion, however. About the worst the losers will get will be an "I told you so" from the winners and then all will be peace and harmony again.

Spark Scheme

This department has put all of its engineering talent on a report that a new spark plug company will produce a plug that fires in a complete circle without getting any idea of what might be meant. The footnote that the company will concentrate on the heavy duty field is somewhat more clear.

Diesel Demeanor

A manufacturer who is about to splurge with diesel engines feels that maintenance knowledge should keep pace with distribution of the engine and to keep the balance is quietly conducting a school. Only full fledged gasoline engine mechanics are permitted to enter its portals.

Steam Semaphore

About once every six months our internal combustion musings are interrupted by the hiss of escaping steam rumors. The latest concerns an eight cylinder chassis which is to be finished this year. It raises

plagued with a million and one organizational details, and today expressly indicated such a plan as one of its administrative objectives, there isn't a chance that the railroads, public opinion and Congress—not to mention the trucking industry—would tolerate it.

Boiled down, the plan means that railroads would have to give to trucks all of the l.c.l. short-haul traffic which currently is greatly desired, and step up the service on their long hauls to meet the requirements of shippers who now find it more advantageous to use trucks in such service. The long haul business that trucks would give up would not sufficiently compensate the railroads for their sacrifice of l.c.l. traffic. At least the Commission would find it difficult to convince the railroads, the public and Congress that such would be the case when the popular belief is that there is not enough of all kinds of traffic to suit the rail carriers. The railroads, it seems safe to say, would fight the idea tooth-and-nail—under present conditions.

We make that latter qualification because if the political strategy of the railroads is successful, conditions will be altered, and not only will they not oppose economic apportionment by regulation but they will make it a policy of management.

The first step in this strategy, as we see it, will be to get acceptance in Congress and the I.C.C. of the theory that railroads should not be discriminated against in their applications to acquire and initiate motor-trucking services. The railroads are conscious of a pronounced sentiment against such a theory—a sentiment which is inspired by the feeling that such a course would give the railroads a monopoly of transportation by rail and by road. This sentiment reached a climax during recent hearings of the Senate Interstate Commerce Committee on amendments to the Motor Carrier Act. One of the amendments was proposed by Senator Shipstead. Reduced to its intent, it provided that if a railroad or a person controlled by or affiliated with a railroad applies for a motor carrier certificate the Commission "shall not issue such a certificate unless it finds that the transaction proposed will promote the public interest by enabling" such applicant "to use service by motor vehicle to public advantage in its operations and will not unduly restrain competition."

What this amendment did was give voice to a fear that the railroads might get control of highway transportation if opposition to such control were not specifically incorporated in the Motor Carrier Act. It was withdrawn by Senator Shipstead in view of the assurance by Commissioner Eastman that provisions already in the Act would take care of the purposes of the amendment. The Senator declared that his amendment was as important as any of-

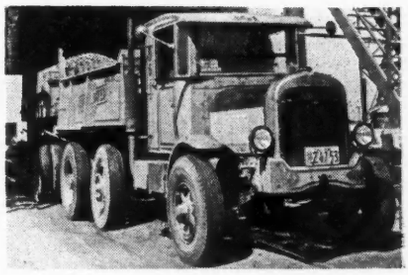
(Turn to Page 66, Please)

The 75-ft. duralumin ladder of this latest Walter fire-fighter is completely power-operated, is mounted on an unusually short 222-in. wheelbase four-wheel-drive chassis

Nose for News

According to Editor and Publisher the city council of Des Moines became embroiled in an argument over a city owned truck, one member maintaining that someone had gypped the city by selling it a one-ton truck with 1½-ton body instead of a 1½-ton truck.

The city editor of one of the newspapers sensing a chance to hop up a minor scandal suggested to his staff, "Let's get the damned truck and weigh it."



Proving that diesels have a place in the short as well as long-haul sun are the eight Cummins-powered Federals of Consolidated Rock Products Co., Los Angeles. They haul 15 tons over a maximum route of 20 miles

steam in a few minutes from cold, the heat coming from an electrically operated oil burner.

Lubrication Lecture

Another axle manufacturer has sent out a bulletin which in effect states that he will not be responsible for the axle if active sulphur compounds are used to lubricate it. He will also test each of the non-active sulphur lubricants before recommending them.

Brake Background

A somewhat reluctant correspondent informs us that a new hydraulic brake master cylinder is in the works. It incorporates a steel piston and eliminates the rubber cup. The correspondent is described as reluctant because no more details were forthcoming.

Truck Translation

In combing the industry for items of interest ahead of their release date it has become apparent from several sources that one of the large truck manufacturers will have a new line of trucks for Fall with a complete new line of engines and everything. We even encountered chips on the line that said that several of the new engines would beat the first frost into 1938 Autumn history.

Diesel Dope

We have it on good authority that two smaller diesels are on the way. One, scheduled to make news within the month, will have 251 cu. in. developing 57 hp. The other, to be announced later will have 377 cu. in. and will develop 85 hp. The same manufacturer will have a new injector within about 90 days.

1

2

TIME

THE SPARK TO THE TUNE OF THE FUEL

You've got to get rhythm in your engine to get best performance and economy and here's a way to get it that disregards the averages and deals only with actualities

By Henry Jennings

Technical Editor, Commercial Car Journal

IGNITION timing is recognized as one of the biggest single factors in obtaining fuel economy and maximum power from a truck engine. In spite of this recognition, the relation of the spark to the position of piston and valves seems to be subject to more inattention and maladjustment than any other phase of engine tune-up.

In order to get a clearer understanding of the importance of ignition timing it would be well to review a few of the known facts so that they will be fresh in mind and serve as a solid springboard from which to discuss the process which will be suggested in this article as a method of obtaining the optimum ignition setting. The best grandstand from which to review the spark parade is the top of the piston so, figuratively, let us ride up and down on this part.

At the completion of the suction stroke the cylinder and combustion

3 4

1. First step of the timing process described in this article consists of jacking the rear. Engine must be warm, of course
2. Next, spark-plug wires are removed from alternate cylinders in firing order to provide a compression load during test
3. Then with throttle set for 30 m.p.h. adjust distributor and lock at the point which gives the highest speed reading
4. An electric tachometer simplifies the job somewhat for there is no need to jack the rear and one man can watch the dial

chamber are filled with a charge of ignitible gas. The piston comes up on the compression stroke to compress this gas to make it more dense so that when it is ignited it will create a stronger pressure on the top of the piston, thus giving a more powerful power stroke. Since the greater the compression the greater the power upon ignition, it is obvious that the point at which to ignite the gas is the point of greatest compression, which is upper center between the compression and power stroke.

The combustion of the compressed gas is, however, gradual, so if the spark is set for exactly top center, part of the power is lost. When the spark occurs, the gas in immediate contact with the spark plug points starts burning instantaneously, but it takes time for the combustion to spread, thus the piston is part way down the power stroke before the maximum combustion and consequent maximum pressure are developed. If the spark occurs after top center, even more power is lost because the spark is later in its relation to piston travel and the piston is further down the power stroke before the maximum pressure is developed. In addition the gas is not at the point of greatest compression when it ignites and consequently the pressure will not be as great.

If the spark occurs too far ahead of top center, the combustion will be general before the piston reaches top center and the effect of the combustion will be a tendency to drive the piston back down before it reaches top center, thus exerting a force to run the engine backwards. The discernible effects of this condition are a sharp power loss and pinging.

When the spark is timed right it occurs just enough ahead of top center so that the flame has time to spread to maximum proportions when the piston has reached and passed top center just enough so that the direction of travel has been reversed. The problem then is to determine the point at which the spark is to occur so that the amount of time for the piston to reach its correct position and the amount of time from spark to maximum combustion are the same. Spark timing is so critical that the difference between good and bad timing is only a few thousandths of an inch of piston travel.

As the throttle is opened the engine speeds up and the amount of time required by the piston to travel from the point of spark to the point of maximum combustion is reduced. Since there is no way of speeding up the flame-spreading process it becomes necessary to have the spark occur earlier in relation to the piston travel. The spark must occur further from top center on the compression stroke. The automatic spark advance incorporated in the distributor takes

(Turn to Page 44, Please)

By **ERROL J. GAY,** Ethyl Gasoline Corp. Above: Rebuilding carburetor . . . a job best handled by men who know their stuff

CONVERT THE GAS GUZZLERS TO A TEMPERANCE TECHNIQUE

A carburetor maintenance routine to effect sensible economies, excerpted from a paper presented at the recent Public Utility Meeting of the S. A. E. in Cleveland by a man who bases his ideas on trouble-shooting experience gathered in all parts of the United States

CARBURETORS spend money for the fleet operator each hour the vehicle is in motion. Should the vehicle see a large amount of service every day, it is possible for the carburetor to spend two to three times as much as is paid the driver of the vehicle. Fortunately, there is nothing to prevent a reduction in the carburetor's rate of pay and it is possible to effect sensible economies at this point.

Improper maintenance of carburetors usually is caused by three important items:

1. Lack of knowledge of the proper functioning of the carburetor.

2. Lack of trained men to do the work.

3. Lack of proper test and repair equipment.

The small fleet operator might be better served by having the carburetor manufacturer, or a large and well equipped service branch, inspect and rebuild his carburetors at definite mileage intervals. The large fleet opator should employ a capable, trained carburetor and ignition man. This man should be supplied with sufficient test equipment to do a thorough job. Test equipment and its uses are:

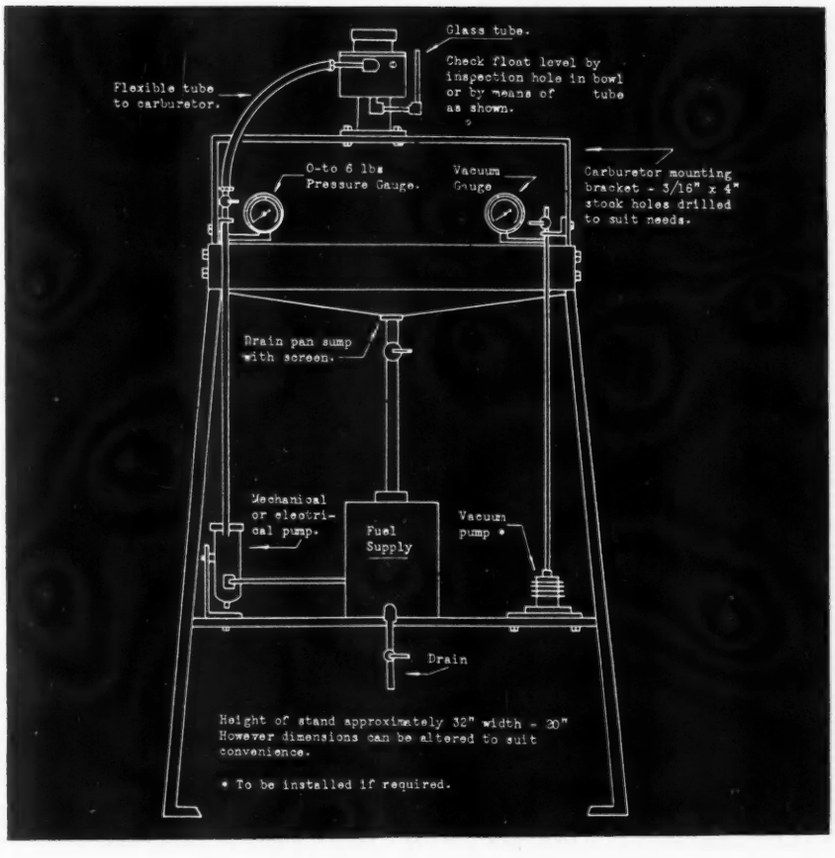
1. A stand for testing float levels. This can be made within your own shop and should consist of a tray with a raised ledge. This tray should be dished towards a center drain. The drain should flow back into the supply tank underneath the tray. Over the tray should be a mounting bracket on which various types of carburetors can be fastened. Fuel pressure can be supplied by an Autopulse pump, a motor driven gear pump, or a cam driven AC pump. In any case, at least 6 lb. of pressure should be available. A pressure gage should be installed where it is easily visible to the man working at the test stand. This stand can also be equipped with the necessary gages and holding fixtures so as to rebuild and test fuel pumps.

2. Many shops check float levels with washing solutions in place of gasoline. There is, of course, the fire hazard of using gasoline for this work but the difference in specific gravity between a washing solution and volatile gasolines may make a large difference in float levels. It is also well to point out that gasoline cannot be used again and again, day after day, and expect to obtain correct float level readings. Each time the gasoline is aerated by being pumped into the carburetor and then drained back into the supply tank it loses a small part of its more volatile fractions until it, too, will give a false float level reading. Each day should be started off with fresh gasoline in the test equipment which has been taken from the main supply tanks. If non-inflammable solutions must be used in order to abide by fire rules then care must be exercised to use a solution of the same specific gravity at all times and a careful calibration made so that the float level, when set with one of these solutions, will be correct when gasoline is used.

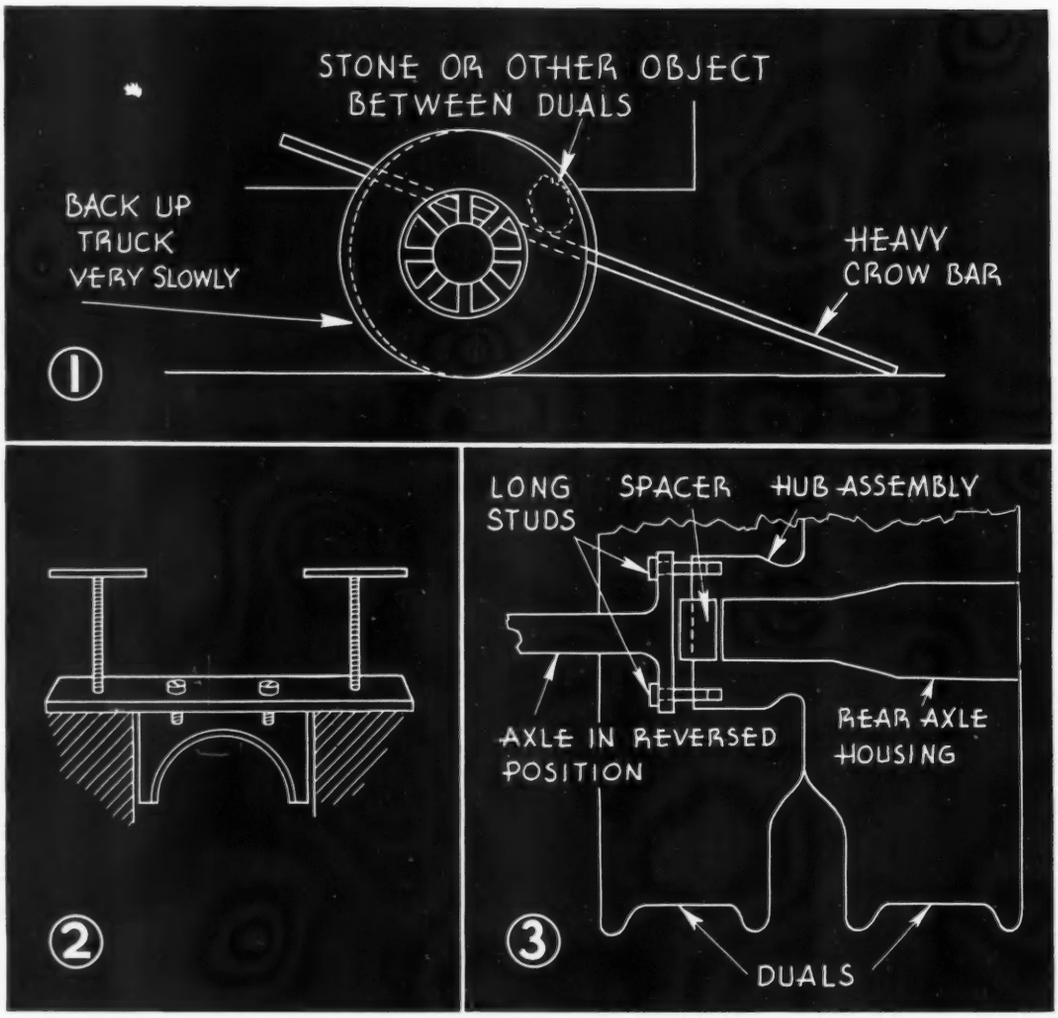
When checking float levels it is always advisable to subject the float mechanism to at least a quarter pound higher pressure than is being maintained at the fuel pump of the engine on which the carburetor is installed. This subject of float levels is highly important and attention to this detail will reflect itself in improved fuel economy. Float levels should be set to manufacturer's specifications, pref-

(TURN TO PAGE 54, PLEASE)

Below: An easily assembled testing stand for checking float levels. Full details of the equipment appear in the article


Glass tube.
Check float level by inspection hole in bowl or by means of tube as shown.
Flexible tube to carburetor.
0-to 6 lbs. Pressure Gauge.
Vacuum Gauge
Carburetor mounting bracket - 3/16" x 4" stock holes drilled to suit needs.
Drain pan sump with screen.
Mechanical or electrical pump.
Fuel Supply
Vacuum pump *
Drain
Height of stand approximately 32" width - 20" However dimensions can be altered to suit convenience.
* To be installed if required.

5 DOLLARS Will Be Paid by Commercial Car Journal for Each Hint Accepted. Ideas Count. We Will Polish Them Up.



SHOP HINTS FROM FLEET SHOPS

1. Tire Tool

By Paul P. Schillat

Pennsylvania Baking Co., Scranton, Pa.

When stones get caught between the tires on dual wheels I have frequently removed them by inserting a crowbar from the back between the tires and between the stone and the hub of the wheel. Back up the truck very slowly and the stone will be forced out without damage to the tires.

2. Bearing Puller

By Howard L. Kline

Beth-Allen Sales Co., Allentown, Pa.

The illustration shows a tool for pulling main bearing caps. The flat piece of steel is ½ in. by ¼ in. by 12 in. The two Tee handles are made of ½-in. cold rolled steel and threaded, of course, on the length that is not used for handle. In the flat piece are cut long slots wide enough to accommodate any bearing cap bolt and the slots make the tool fit regardless of bolt spacing. To use remove the bolts, insert them through the flat piece and reinstall. Then simply screw down on the Tees.

3. Wheel Puller

By J. R. Morris

Kraft Phenix Cheese Corp., Pittsburgh, Pa.

When a tight set of duals on a full floating axle are encountered simply remove the axle and adjusting nuts. Then place a block of wood or a spacer against the rear axle housing end and reverse the axle and butt the flange against the spacer. Two long studs or bolt inserted through the flange into the wheels will draw the wheels off.

4. Swinging Shop Lamp

By W. C. Vogel

Vogel Cartage Co., Columbus, Ohio.

We used a swinging lamp which we built in our shop to provide light wherever it is needed. The bracket is mounted high enough to clear cab and body tops and it swings through 180 deg. One light will cover points as much as 24 ft. apart and when the light is not needed it can be pushed out of the way.

5. Vapor Lock Cure

By Greaves Morris

Bellefonte, Pa.

I have found a cure for vapor lock. Drill and tap the float chamber cover of the carburetor for a ⅛-in. pipe fitting. Drill and tap the carburetor throat near the butterfly, but not close enough to strike the butterfly. Screw a gas line fitting in the float chamber cover fitting. A special fitting for the hole in the carburetor throat as follows: fill threaded end with solder, and then drill with a No. 60 drill. Screw this fitting into place and con-

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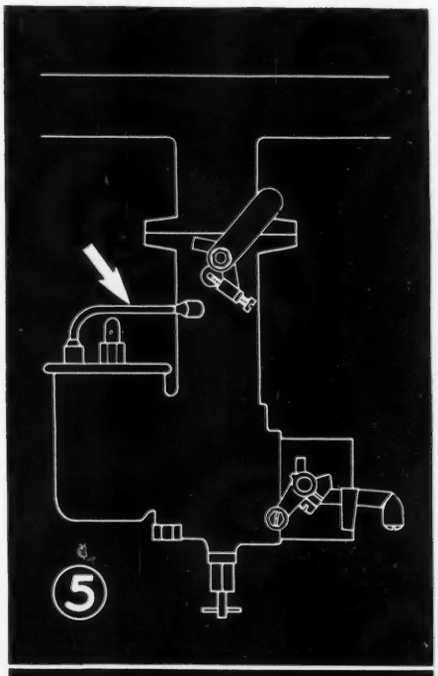
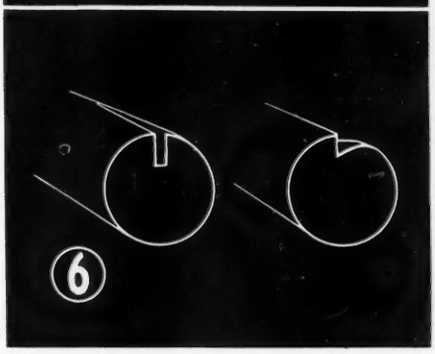
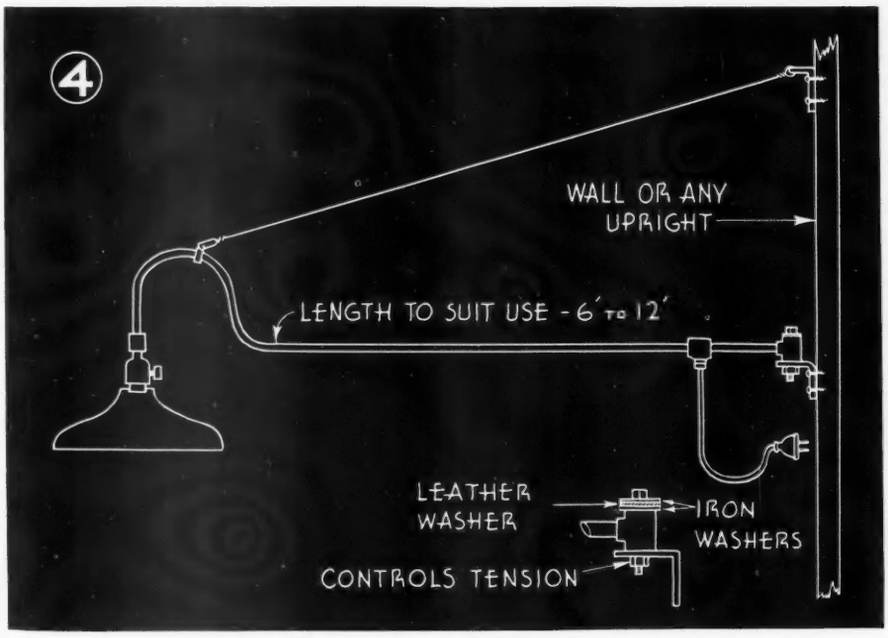






SAE MOTOR TRUCK RATING COMMITTEE

Chairman
F. K. GLYNN
Automotive Engineer, American Tel. & Tel. Co.

J. E. HALE
Manager, Development Dept., Firestone Tire & Rubber Co.

L. R. BUCKENDALE
V.-Pres. Charge of Engineering, Timken-Detroit Axle Co.

A. M. WOLF
Automotive Consultant

G. W. LAURIE
Manager, Auto. Transportation, Atlantic Refining Co.

DONALD BLANCHARD
Society of Auto. Engineers, Committee Secretary

B. B. BACHMAN
Vice-president in Charge of Engineering, Autocar Co.

C. J. BOCK
Truck Div. Engineer, General Motors Truck Corp.

A COMMITTEE of the Society of Automotive Engineers on Wednesday, June 15, at White Sulphur Springs, W. Va., began a study which is of vast importance to the entire truck industry. The purpose of the study is to devise a formula or factor which can be used in rating hill-climbing ability of trucks.

In forming this committee, known as the Motor Truck Rating Committee, the S.A.E. officially recognized the serious consideration being given by the Bureau of Public Roads, the American Association of State Highway Officials, the Automobile Manufacturers Association, and other organizations to the proposal that motor trucks and truck and trailer combinations be required to climb grades of a designated percentage at a minimum speed of specified miles per hour. Readers of COMMERCIAL CAR JOURNAL are familiar with the proposal and its problems as the result of discussions and editorials published here during the last twelve months.

In authorizing the study the S.A.E. recognized the fact that so far only one state has written a performance or ability factor into its laws. South Carolina stipulates a factor of 5 per cent grade at 20 m.p.h. Iowa's revised code has a section labeled "performance ability" but it deals with braking ability "where the grade does not exceed 1 per cent when traveling 20 m.p.h." It does not specify speed up a grade.

The S.A.E. felt, however, that in the event an ability factor is written into laws it is obviously of vital importance to manufacturers and operators that the requirement established and the enforcement methods adopted be in accord with sound engineering principles.

Consequently, the Society reconstituted the Motor Truck Rating

S.A.E. TACKLES ABILITY FACTOR PROBLEM

F. B. LAUTZENHISER
Transport.& Sales Engineer, International Harvester Co.

F. L. FAULKNER
Manager, Automotive Dept., Armour & Co.

E. M. SCHULTHEIS
Assistant Sales Manager, Clark Equipment Co.

M. C. HORINE
Sales Promotion Manager, Mack Mfg. Corp.

Committee, which had struggled with truck ratings several years ago and had made recommendations that did not get industry acceptance. It authorized the committee to resume its work on truck ratings, because the lack of uniformity in the method of rating trucks continues to cause confusion. In addition, it instructed the committee to study the automotive engineering problems which a legal minimum performance requirement and its enforcement would present.

In general terms, the committee's objective will be to develop sound engineering bases for rating motor trucks, particularly with respect to their ability to meet a legal minimum performance requirement.

The committee, as reconstituted, has a membership of 21 and a secretary. In this membership are some of the best engineering brains in the manufacturing and operating ends of the truck industry. These pages are decorated with the names of the committee members and with the photographs of most of them. Analysis of the membership shows that it is made up of five fleet operators, one former operator, seven truck maker representatives, one truck and trailer maker representative, two trailer maker, two tire maker and two axle maker representatives, and one automotive consultant.

At its first meeting the committee voted to admit members of the trade press to its meetings to enable them to keep personally abreast of its deliberations and to acquire the background which will be useful in discussing recommendations of the committee when they are made. The committee agreed that no publicity should be given to the details of preliminary discussions. When conclusions have been reached they will be accorded full publicity.

The committee decided that in view of events it was desirable to deal with the performance factor matter first. After it has been disposed of, the committee will begin working on a uniform method of rating trucks.

The first meeting was attended by the following: Messrs. Glynn (chairman), Bachman, Bock, Buckendale, Faulkner, Hale, Horine, Laurie, Schultheis, Tuttle, Wolf, Lautzenhiser, Blanchard (secretary), and the writer.

The committee decided on the form which the truck performance ability factor should take and turned over to its executive committee the task of making comparative computations for consideration at the next meeting.

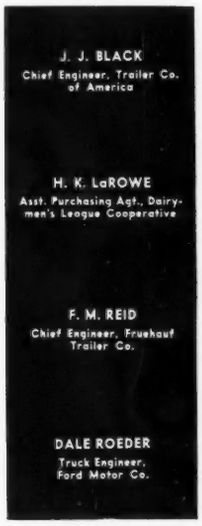
(Ed. Note—Other events at the White Sulphur Springs Summer Meeting of the S.A.E. will be reported in the August issue.)

Recognizes Proposals to Enact Performance Requirements for Trucks by Naming Committee to Devise Ability Rating Method Based on Engineering Principles

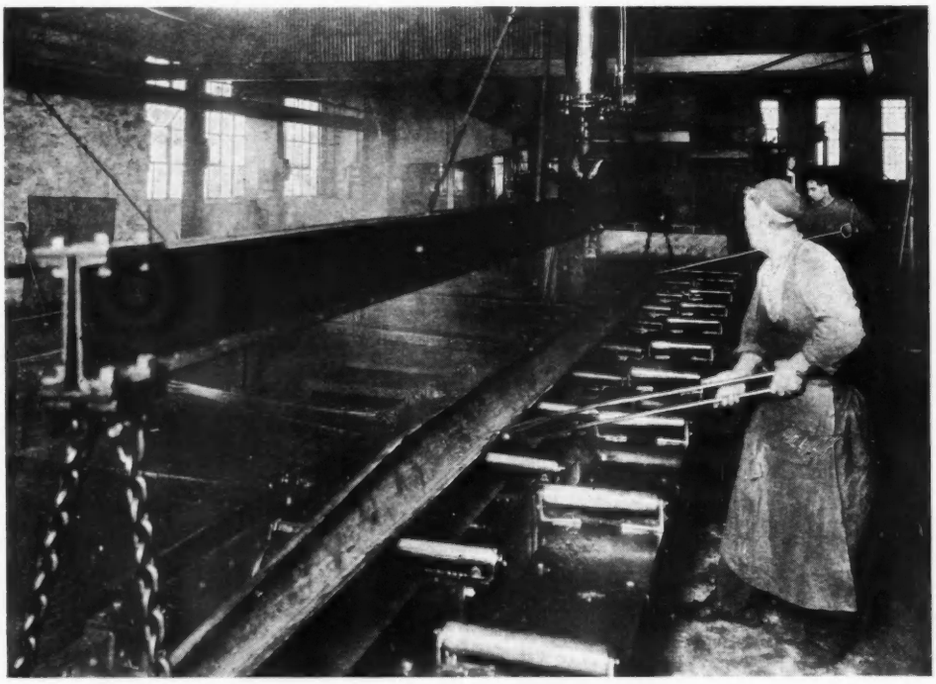
By

George T. Hook

Editor, Commercial Car Journal


J. J. BLACK
Chief Engineer, Trailer Co. of America
H. K. LaROWE
Asst. Purchasing Agt., Dairymen's League Cooperative
F. M. REID
Chief Engineer, Fruehauf Trailer Co.
DALE ROEDER
Truck Engineer, Ford Motor Co.

J. L. KEESHIN
Chairman of Board, Keeshin Motor Express Co.
CLINTON BRETTELL
Formerly Garage Superintendent, R. H. Macy & Co., Inc.
J. C. TUTTLE
Engineering Development, Goodyear Tire & Rubber Co.
S. A. JEFFRIES
Chief Engineer, Truck Division, Studebaker Corp.
C. W. KYNOCH
Sales Engineer, Dodge Division, Chrysler Corp.
E. W. WINANS
Chief Engineer, Federal Motor Truck Co.



Above: The frame member has just come from the heat-treating ovens in the background

OPERATORS BLOW HOT AND COLD ON HEAT-TREATED FRAMES

Fleet Men Express Views on Why They Are or Are Not Influenced by Heat-Treated Frames in Picking Trucks

ONE hundred thirty-eight fleet operators were questioned by COMMERCIAL CAR JOURNAL on the subject of frames. Of this total, 31 went on record as favoring heat-treated frames to the extent that it would influence their selection of new trucks. Ninety-one fleet operators said that heat-treated frames would not influence their selection of new trucks. Eleven did not answer the question, two asked to be excused on the grounds that they were hauling only for vehicle manufacturers and therefore were not in position to select their trucks regardless of what frame was used. Three public utility operators disqualified their own votes voluntarily by stating that their operations were not severe enough to give any kind of frame a good workout. There were 28 public utility or governmental fleets among the "no's" who did not see fit to disqualify themselves on the basis of light or constant load.

Among the "no's" and "no answer" were 14 who pleaded ignorance. Their answer was accurate in either case in that heat-treated frames had no consideration in new truck selection but there was no indication as to whether or not it would have made a difference if they had been prepared with specific knowledge on the characteristics of the two types of frames. Four fleet operators among the "no's" simply stated that the various truck salesmen who called on them had never brought up the point. One said that he "suspects the salesmen of being heat-treated."

There were relatively few statements of positive nature in the accumulated evidence on the "no" side.

Sixty-nine operators voted against the heat-treated frame without making any comment at all. One stated, "I presume we should be influenced toward heat-treated frames as it is

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Above: A mechanic shoots the works with compressed air test. Below: The handy work bench slides out of the repair truck. Lower corner: A part of the fleet

MAINTENANCE AND CONCRETE MIX

Pointers from a Repair Gang That's Part Man, Part Elephant, Part Gazelle

By C. C. Harrington

LIKE time, wet concrete waits for no man. That is, unless it is continuously agitated. Stop agitation for an hour or so and the sloppy gray mess will have turned into a chunk of rock, clinging fast to everything that it touches.

In hauling ready-mixed concrete, frequently as far as forty miles from the mixing plant, a road failure demands some fast action by the maintenance crew. Perishables can be transferred to another truck. Not so a batch of concrete. Let the agitating drum stand idle for a few hours and you might as well throw the whole thing in the ditch. If the truck is not repaired and on its way within two hours at the most, the only alternative is to remove the filling plate from the agitating drum, roll the drum around by hand and dump the entire load of concrete in the road. Either that or dump a few pounds of sugar in the mixture to keep it from setting. In any event, the entire batch is lost. And six cubic yards of ready-mixed concrete costs plenty of money; frequently as much as $8 per yard.

And another thing. When a concrete job is being poured, it is necessary to maintain a steady flow of mixture to the forms, so that the early pours have no chance to set while waiting for the rest of the mixture. There is generally a time clause in the contract. A long interruption in the flow of this concrete may ruin the entire job.

It is absolutely imperative, therefore, that a firm selling ready-mixed concrete and delivering it wherever needed, must have a reliable fleet of heavy duty trucks. And as the most reliable piece of machinery in the world will frequently go haywire, the

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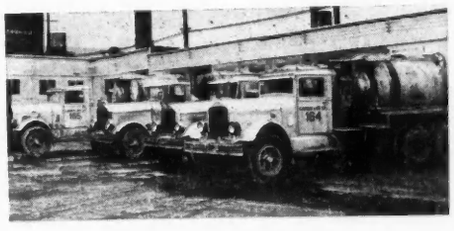


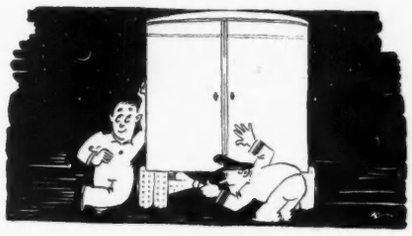
PULL OVER, YOU!

A Tale of Trucking in Texas, or How The Anti-Truck Laws Are Administered North of the Rio Grande Where Truckers Have Been Fined for Not Carrying Matches

IN the outskirts of the small West Texas town a flashlight blinked and waved mysteriously. But it was no mystery to me, for I knew what it was. I learned the meaning of those belligerent blinkings and wavings years ago when I first started in the trucking business. Since that time I have learned to hate those periodical flashlights and for what they stand—highway patrol officers—to me, just plain cops.

I shrugged my shoulders and eased up on the accelerator of the lumbering produce truck under and behind me. Coming closer to the waving flashlight it began motioning toward the side, off the pavement. I also knew what I would find on the side of the road—a line of halted trucks similar to mine and three or four cops with their eternal two-wheel scales. I pulled over behind the last truck, leaned disgustedly on the steering wheel and waited my turn.

I wasn't worried because I learned when I went through this town last night that the cops were going to have a "session" tonight. I had bought a load accordingly—a load within the law—not over 7000 lb. net weight. I wasn't going to be fined for overloading tonight, but the profits of this load would hardly cover the expense of the trip. Trucking is a profitable business—if the



law would permit enough load to make a profit. But with 7000 lb. for a load, and the prices of produce going down—well, the profits are just not what they used to be.

A figure loomed at the window of my truck cab. It was one of the cops. He poked his head inside and began his routine questions.

"Hello, Pal. Where you headin'?"

Cops ironically called truck drivers "Pal," and we usually returned the favor.

"Midland." I hoped my voice sounded as sarcastic as his.

"Where did you load out?"

"El Paso."

"What time did you leave there today?"

I grinned inwardly at this question. I knew what was coming so to avoid an argument I fudged an hour on my answer. "I left El Paso at 2 o'clock this afternoon."

Even then the cop started scratching his head and figuring silently. It was 7 o'clock now and it was a good hundred miles of hilly country back to El Paso.

The cop looked up in my face and thrust suspiciously, "You had to make better than 25 miles an hour to get here by this time. You better watch that speeding. We're going to make it hard on you guys when we find you making over 25."

As if they weren't already making it hard on us. However, I didn't answer him; I knew it would be useless. I had gone over 25 miles an hour; but schedules are tight and produce spoils fast in hot weather.

Then the cop sprang his most important question—the question he had stopped me to ask.

"How much do you have on?"

Before I could answer he turned away from the cab and started around toward the rear of the truck. I climbed out of the cab and followed behind him. He squatted beside the rear duals and blinked his light on the main and overload springs. I thought how rich I would be if I had a dollar for every time a cop looked at my springs for this reason. No matter how much you tell them you have on they never believe you. They always stroll around the truck kicking the tires, climbing up the side-boards to rock the bed, and always—without fail—they look at your springs. Maybe some of them can judge a truck's cargo weight by looking at the bent springs, but I doubt it. That habit is just a suspicious routine.

I poked the cop in the ribs and said, "No luck this time, Pal. I'm not overloaded by a few pounds." He didn't say anything so I added, "I have on about 6900 pounds."

The cop just looked at me and the springs and said, "O. K., Pal, we'll see when it's your time." With that warning he walked away toward another truck.

I walked back up to the cab, slammed the door and turned on my heel toward a circle of other truck drivers standing in front of a cafe. I walked about five steps and remembering, turned and walked back to my truck. I flipped on all my clearance and tail lights—as prescribed by law, even in a "session line-up." Then I joined the circle of drivers. I knew most of them.

"Hi, fellows, anybody 'over' tonight?"

They all turned toward me in accord, grinning sarcastically.

"Yeah, Liggett here," Bill Holloway, owner of three trucks out of Stanton, nodded toward a scowling man standing at the outer edge of the circle. "He got stuck $19.50. He was only 600 lb. 'over'."

Liggett stepped a little closer in the circle and said, "But what hurts me worse is that the 600 lb. overweight is just six sacks of feed I was taking home for my cow."

One man standing opposite me in the circle said doggedly, "Well, I may as well get out my money now. I'm 'over' about 500 pounds." Then he looked around the sullen circle of faces half abstractedly and half furious.

"Damn this 7000-lb. load limit, anyway! If it wasn't for having to move my family with me, I would leave Texas and start trucking out of some other state. Moving a family would cost more than I have."

Whether that man knew it or not, he expressed the sentiment of nearly every trucker in the state with those words. In surrounding states the load limits are much higher. Cops and Railroad Commission agents don't stop trucks at every turn of the road and roll them on their scales. But most of the truckers have families and homes they don't want to leave. Some of them are just plain paid drivers working for trucking companies. A month hardly passes that some of the drivers don't get their salary docked because of a speeding fine—trying to get the produce to the stores on time—so they will have a job the next morning. In Colorado the speed limit is 60 miles an hour. Trucks hardly ever go that fast, but they don't get fined for going over 25 miles an hour. Statistics show that Texas has more traffic accidents than Colorado.

Contrary to popular belief, truckers don't burn up the highway with an

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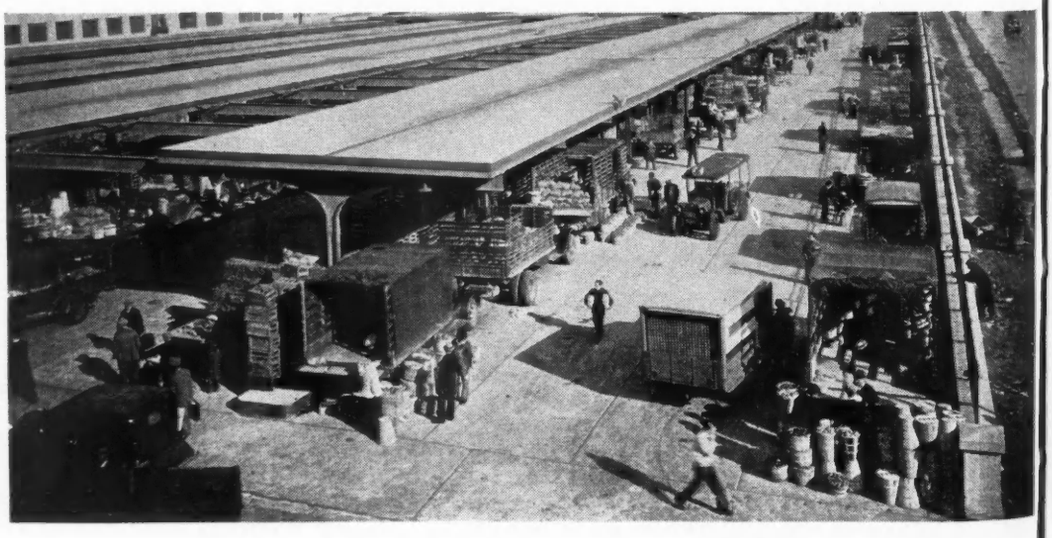
By John W. Wilson

President, Wilson Produce Co., Midland, Tex.

EDITOR'S NOTE: New York was chosen as an example of dependence on truck transportation because it magnifies in a dramatic way the dependence of smaller cities and towns all over the United States. More thun 120,000 communities have no rail facilities whatsoever

What TRUCKIN' MEANS TO

Not the Night-Life Kind of Truckin' They Have in Harlem but the Highway Night to Help Feed more than 10 Millions and to Provide Them with Com-



Top: Manhattan's millions live in a restricted area. Right: New York markets like this one do a total annual business of 11 billion pounds of perishable foods. Opposite page: Up from the Holland Tunnel streams an almost endless line of trucks bound for the city

NEW YORK

Type that Works Day & forts and Conveniences

MANY people, including a goodly number of its inhabitants, take New York City for granted. They assume that it is perfectly natural that, despite New York's urban character, they can arise each morning and find that the milkman has preceded them, that the grocery or the bakery has delivered the rolls and butter, and that the newsdealer, as usual, has brought his paper.

But how did everything get there? How was it made possible that that which first saw the light of day in a far-off farm or forest, away from paved streets and fast subways should be deposited so carefully and completely at immaculate and sometimes untidy doorways?

What part did motor transportation play in this drama? Was this part a major or minor one?

As one famous New Yorker loves to say, "Let's look at the record."

New York City is, without doubt (1) the world's greatest food consuming center, (2) the world's foremost distribution center. Ten million New Yorkers living in an area of 309 sq. miles consumed 10,900,055,771 lb. of perishable food in 1936. and produced, in that same year, manufactured goods valued at close to three and one-half billions of dollars. As the 10,900,055,771 lb. represents 15 per cent of the national production of perishable commodities and as this figure, in turn, is a little less than a sixth of what the entire country produces, New York City's share of the total amount of perishables available is not picayune.

Suppose we tried to make this aggregate a little more vivid.

From the Battery, the southernmost tip of Manhattan to Yonkers, its most northern point, is about 15 miles. Visualize a single train of freight cars stretching from the Battery to Yonkers and imagine each car filled with perishables. Now take another train. Have it equally long. Fill each one of these cars with flour, cereals, coffee, tea, sugar, canned goods and staple groceries. With both of these trains full, you have the approximate total of commodities and perishables that are consumed in a single day in our wonder city.

In cold, dry figures what does this represent?

In 1936, the last year of record, the Department of Markets of the City of New York informs us that daily 800,000 lb. of butter were consumed; 900,000 dozen eggs; 4,000,000 qt. of milk and cream; 200,000 lb. of dressed poultry; 750,000 lb. of live poultry; 14,500,000 lb. of fresh fruits and vegetables; 500,000,000 lb. of fish and 1,618,621,205 lb. of meat.

This, friends, is eating. Where did all this come from? How did it get to New York?

Cantaloupes, grapes, lemons, oranges, pears, peaches and plums came all the way from sunny California. Washington and New York States sent apples; Florida and Mississippi sent ripe tomatoes. Fresh watermelons came from South Carolina, from Georgia and Virginia, and Georgia also obliged with her famous peaches. Texas, Michigan, Indiana, such distant places as Egypt, Spain and Argentina, sent onions for hamburgers and steaks, and Canada and Maine were on the list with potatoes.

Supplementing the national crop, were grapes received from Argentina and the latter country also stepped into the breach when the supply of peaches gave out. New Yorkers crunched celery from the Bahamas and sent grapefruit squirting that came from Cuba. Far away Belgium supplied the cabbage for stews and salads, and Chile did its bit when the demand for peaches soared way above supply.

Did motor trucks play a vital part

(TURN TO PAGE 78, PLEASE)

By Irving Sherman

PCOC members at Washington organization meeting, l. to r.: Winchester, Pymer, Kile, Chairman O'Hare, Hibben, Brenckman

PRIVATE CARRIER

Sub-Committee Begins Drafting of Plans to Unite 3,500,000 Private Truckers in a National Group

by L. W. MOFFETT

Washington Editor, Commercial Car Journal

Arthur C. Butler, of the AMA, loaned to the PCOC as organizing secretary

THE initial job of whipping a national organization into shape to more adequately represent the views of private motor truck operators was turned over to a three-man sub-committee on June 16 when the Private Carriers Organization Committee met in Washington to lay further plans for a group which is becoming increasingly concerned over both national and state legislative trends affecting their operations.

This sub-committee, composed of R. J. O'Hare, of the International Association of Milk Dealers; J. F. Winchester, of the Standard Oil Co. of New Jersey and vice-president of the A.T.A.'s private carriers group; and Arthur C. Butler, secretary of the Automobile Manufacturers Association's motor truck committee, was directed to draft a specific program of action on which the committee's organizing drive will be based. Mr. Butler, who was given leave of absence from the Automobile Manufacturers Association, was designated as the organizing secretary for the group.

After a four-hour session at the National Highway Users Conference headquarters in Washington, this statement of policy was announced:

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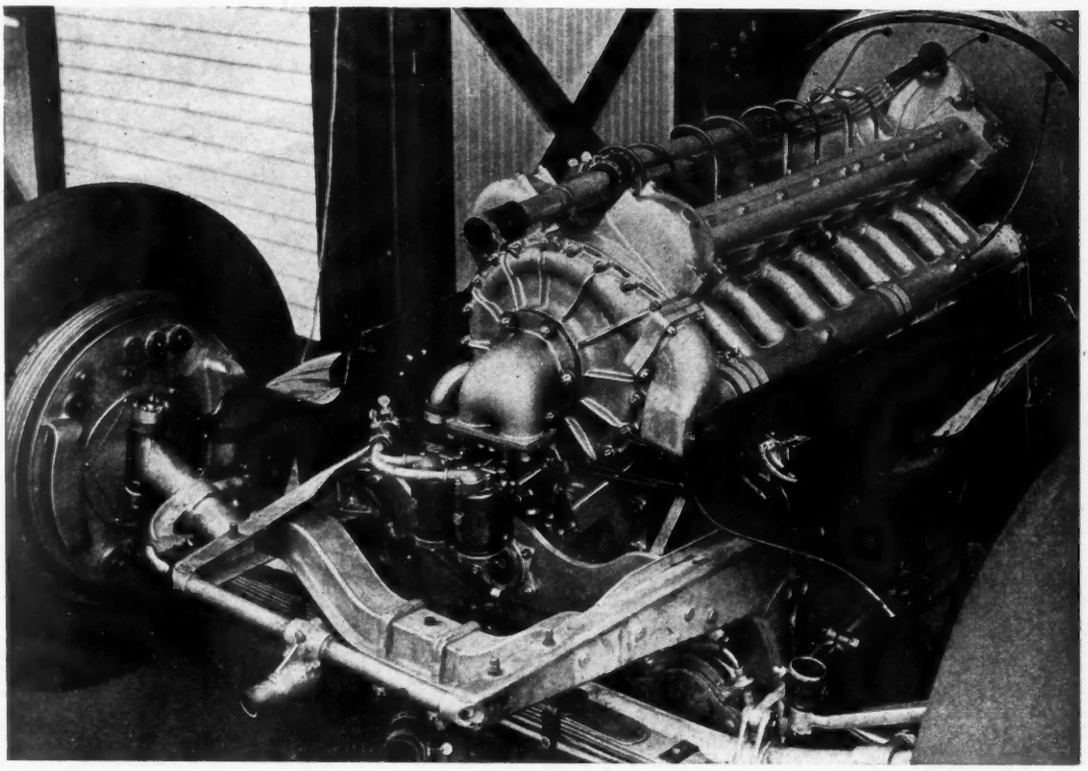

The blower of Lou Meyer's Offenhouser was mounted right on the block, had no part in forcing him out at the 149th lap

BLOWERS

GET BLACK EYE IN INDIANAPOLIS RACE

Seven of the Eight Supercharged Cars in the Starting Line Fail to Finish Event But Not All Failures Are Due to Blower Troubles. Clutch and Oil Pump Nab Two

Written Especially for CCJ

By

Bob Hankinson

Technical Editor, Motor Age

INTEREST in the recent Indianapolis 500-mile race was focused on superchargers because under the new International Racing Formula in effect this year, blowers were allowed on engines of 183 cu. in. or less displacement. The fact that only one of the eight blown jobs entered finished the race, might seem to be an indictment of superchargers.

It is a known fact that supercharging an engine makes it fast. This is further proved by the performance turned in by the supercharged jobs driven in the 1938 race. For the first 175 miles the field was led by supercharged jobs, and the pace was better than 120 miles per hour. It wasn't until Mays, Snyder and Householder were forced into the pits for gas and tire changes, or by other trouble, that Roberts with his non-supercharged car was able to get the lead. When Snyder came out of the pit he immediately overhauled Roberts and took the lead again.

Snyder and Householder, each driving a Sparks-Thorne special six-cylinder engine of 179.4-cu. in. displacement, were forced out of the

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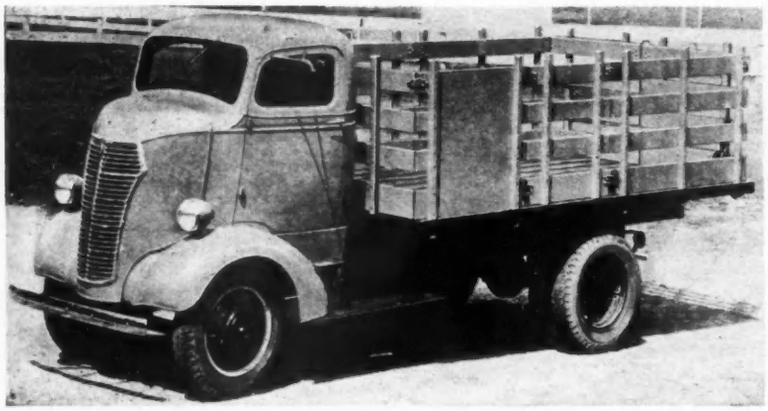


One of the new Chevrolet-Montpelier C.O.E.'s offered in three lengths

C.O.E. CHEVROLET-MONTPELIER UNIT

THE Chevrolet-Montpelier cab-over-engine unit is now offered in the three wheel bases of the Chevrolet 1½-ton chassis.

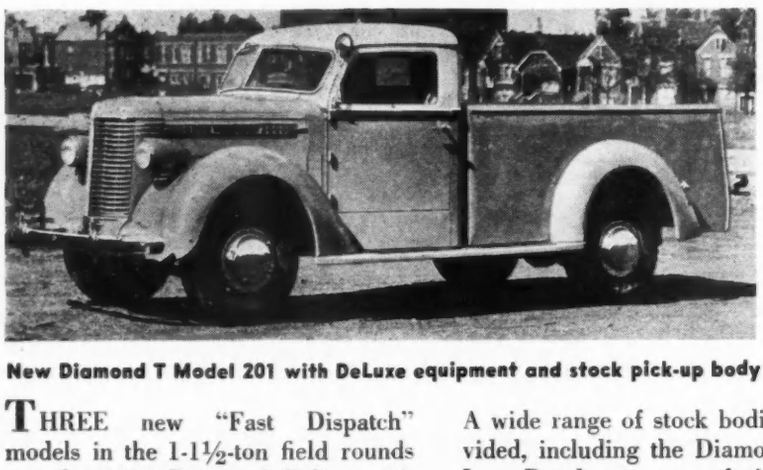
The new unit combines the various advantages inherent in cab-over-engine design. Bodies ordinarily used on a 157-in. wheelbase chassis can be used on a 131-in. wheelbase chassis. All major units are standard Chevrolet units and serviced by Chevrolet dealers.

Accessibility of the engine, for quick servicing and maintenance operations, is provided by a forward-tilting hood and easily-removable floorboards. Comfort has been built into the cab, which has full width seat, good vision and conveniently-located controls. Remote-control gearshift and brake levers eliminate the necessity of dividing the front seat.

The unit is available in three wheelbases, 108-in., 131½-in. and 157-in. The overall length of the 108-in. wheelbase chassis is 172⅝ in., and the CA dimension is 61 in., weight of complete chassis being 3745 lb.

In the intermediate wheelbase, the length overall is 196⅛ in., the CA dimension is 84½ in., and the weight, 3825 lb. Corresponding figures for the 157-in. chassis are 221⅝ in. overall, 110 in. CA measurement, and weight, 3905 lb.

Front axle capacity rating on all models is 4000 lb. Front-wheel tread is 57½ in. Rear wheel tread, with single wheels is 57 25/32 in., and with dual wheels, 66 1/32 in. Cab width is 58 in., and cab height above chassis frame, 64 in. Sixteen-to-one steering ratio is standard, with 17-in. heavy-duty steering wheel.



New Diamond T Model 201 with DeLuxe equipment and stock pick-up body

DIAMOND T's NEW FAST DISPATCH

THREE new "Fast Dispatch" models in the 1-1½-ton field rounds out the 1938 Diamond T line with a companion series of generally similar appearance and construction to the heavy-duty models.

The conspicuous feature of the new trucks is the streamline design. Grille, moldings, radiator apron and fender cover plates are of gleaming stainless steel in the DeLuxe models —in the companion Standard models they are finished in polychrome silver gray.

The 1-ton Model 201 is built only in the 119-in. wheelbase, for bodies from seven to eight feet in length. A wide range of stock bodies is provided, including the Diamond T DeLuxe Panel, two-types of pick-up and open express, stake bodies in two styles, station wagon, milk and ice-cream bodies. Base price of the Standard chassis is $575.

Model 305 is of 1-1½-ton capacity and has a gross rating of 10,000 lb. It is generally similar in specifications to Model 201 and is built in two wheelbases to take bodies to 12 ft. in length. The engine is of 221 cu. in. displacement. Sixteen-inch wheel and tire equipment are standard, but 20-in. wheels and dual tires can be supplied for heavy service.

Model 306 is a straight 1½-ton model with a gross rating of 11,000 lb. It has the new 17-in. truck tries, which provide capacity practically equal to the 20-in. size and offer a very considerable advantage in appearance. Wheelbase is 150 in. for 12-ft. bodies of all types.

All models have truck-built engines, truck transmissions, full floating rear axles, compression-type rubber spring shackle bushings, 4-wheel Lockheed hydraulic brakes with cast drums, armored cable wiring, and Diamond T's "cushion-cradle" engine mounting. Oven-baked synthetic enamel is standard finish.

A TRUCK that's fairly new, with a good body, and average load represents considerable investment . . . too high to take chances with.

Give it a good driver and Bendix B-K Controlled Vacuum Power Braking and you keep the road hazards down!

Look at it purely from a money standpoint and you've ample reason for insisting on genuine Bendix B-K Power Braking on every truck. Forget for the moment the obligation of public safety. Consider the investment in the truck, the value of the load and the potential loss of a damage suit.

If the low price of Bendix B-K Equipment can lessen the hazard to any noticeable degree, it's a BUY!

Don't purchase a truck without it! Don't let anyone talk you into a cheap substitute. And don't forget that 1085 authorized, competent, trained Bendix B-K Service Stations dotting the highways of America, are eager to keep your Bendix B-K Power Braking 100% efficient.

BENDIX PRODUCTS CORPORATION

(Subsidiary of Bendix Aviation Corporation)

401 Bendix Drive • South Bend, Indiana

BENDIX

BK VACUUM POWER BRAKING A BENDIX PRODUCT

Controlled Vacuum

POWER BRAKING

WHY MOST POWER BRAKES ARE BENDIX

- ★ More Than Meeting All State Laws for Trucks and Trailers
- ★ Least Weight Added
- ★ Fewest Added Parts
- ★ Low First Cost
- ★ Practically No Maintenance
- ★ Instant Remote Control
- ★ All Emergency Features of Train Operation
- ★ Quick, Easy Installation
- ★ Original Brake System Being Left Intact
- ★ Fully Controlled Power Application
- ★ A Nation-Wide Service Organization
- ★ Years of Power Braking Experience and Unapproached Protection Over Future Years of Satisfying Service

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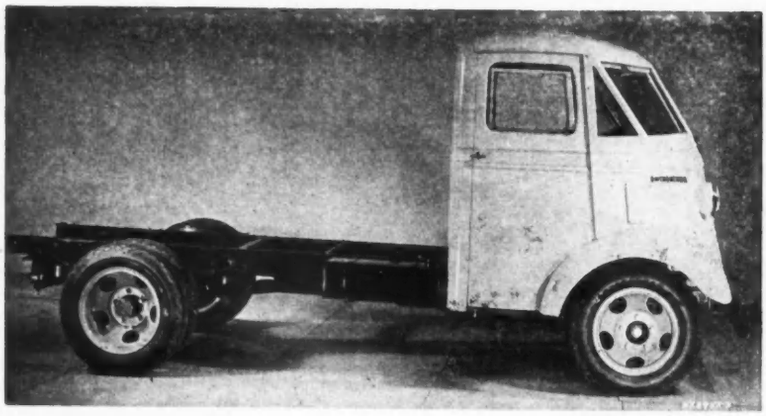


The new Dodge C.O.E. is available on the 1½ and 2-ton chassis

DODGE OFFERS NEW MONTPELIER C.O.E.

AVAILABILITY of the 1½ and 2-ton truck chassis in new cab-over-engine styling has been announced by the Dodge Division of Chrysler Corp. The cab is being built by Montpelier Mfg. Co.

Featuring maximum accessiblity, increased loading space and streamline appearance, these trucks are available in wheelbase lengths as follows: 1½-ton line—108, 133 and 159 in.; 2-ton—108, 133, 159 and 177 in.

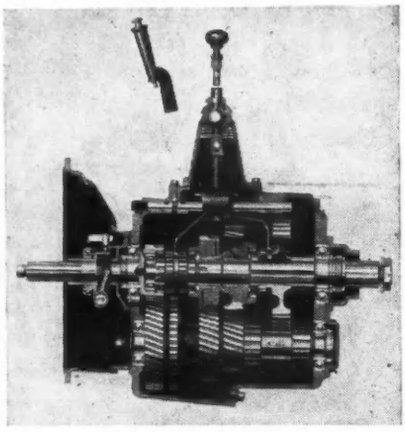
Special emphasis has been placed on driver comfort and general accessibility. An insulated, hinged hood fully exposing the engine for adjustment work, a wide running board making it easy to step in and out of the cab, and the gearshift lever conveniently located beside the driver are three important improvements. Ventilators operate from the cab.

Approximately 28 in. of additional loading space is provided without increased wheelbase length. Dimension from front bumper to center line of front axle is 30 in. and 47 in. from front axle to back of cab. Cab to axle dimensions are 61 in. on the 108-in. wheelbase, 86 in. on the 133-in. wheelbase and 112 in. on the 159-in. wheelbase.

Additional features are special heavy-duty channel-type front bumper, 18-gal. gasoline tank mounted outboard on right hand side back of cab, heavy-duty front axle with large spindles and bearings, spring equipment and larger capacity radiator core. Vacuum-suspended booster brakes and auxiliary springs are standard equipment on the 2-ton and available as extra equipment on the 1½-ton chassis.

Fuller Transmissions For Off-the-Road Duty

The Fuller Mfg. Co. is producing two new transmissions designed for heavy duty transport work and large off-the-road trucks. They are built with three sets of helical gears for quiet operation in the three top speeds. Engagement of the three high ratios is made by use of toothed type clutches. Starting in low gear this type of engagement provides quick and easy shifts from low up through the range into high. A new type of reverse gear construction makes possible a shorter overall length than with conventional construction.



The ratios are:

	Model 4A86	4B86
1st	6.54	5.55
2nd	3.27	3.27
3rd	1.76	1.76
4th	1.00	1.00
Reverse	7.24	6.58

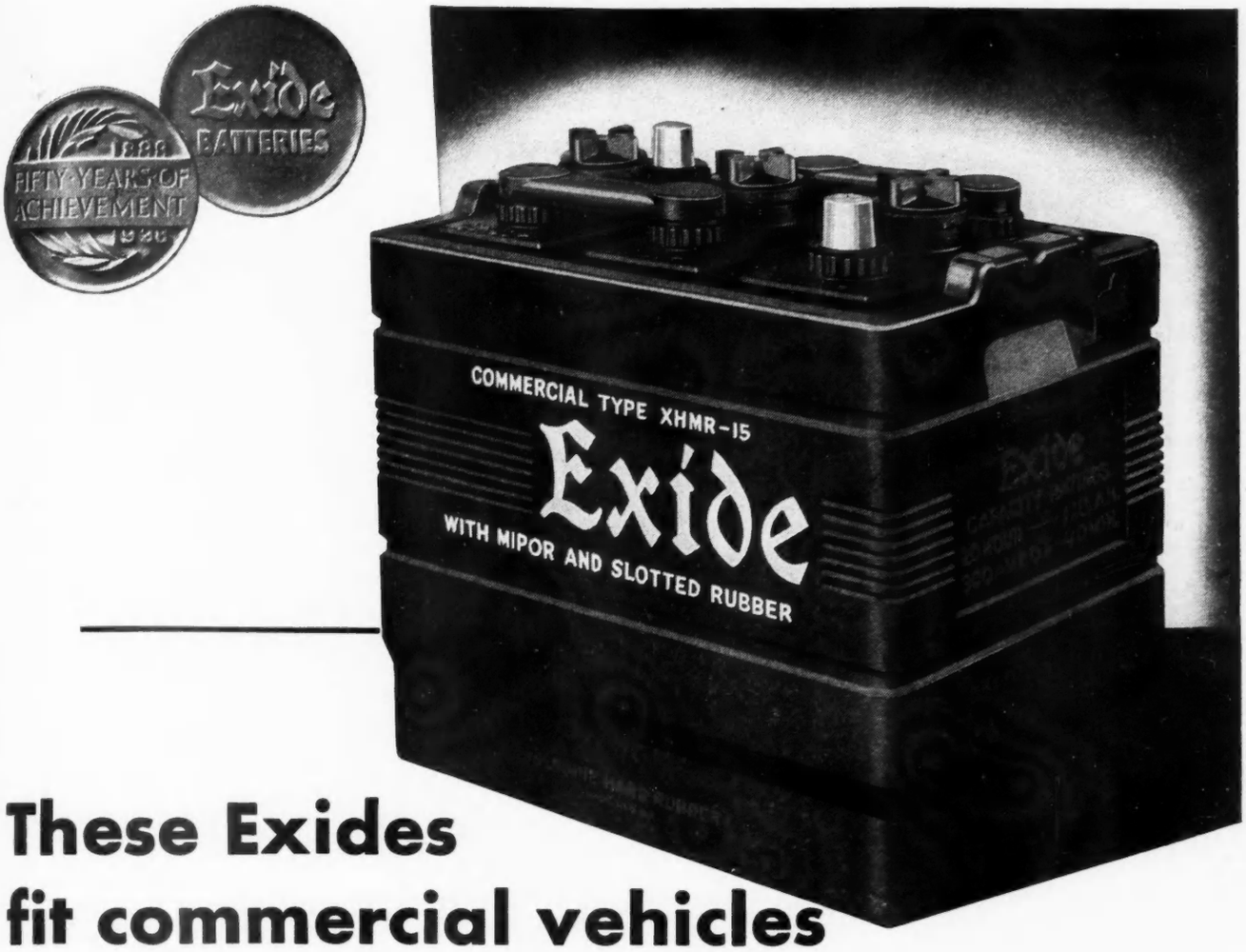
Two New Hypressure Jennys

Two new Hypressure Jennys, models J and K, have been introduced by the Homestead Valve Mfg. Co., Inc. These modern steam vapor spray cleaners are more compact and faster acting than previous models. Model J is portable, contains automatic oil burner and operates at 150 lb. Model K operates at 110 lb.

New Truck Registrations by Makes by Months*

	Auto-car	Brock-way	Chev-rolet	Dia-mond T	Dodge	Fed-eral	Ford	G.M.C.	Hud-son	Inter-nat'l	Mack	Ply-mouth	Reo	Ster-ling	Stew-art	Stude-baker	White Indiana	Willys	Misc.	Total
January.....1938	129	64	10,137	335	3,070	118	9,114	1,746	99	4,501	254	668	216	16	27	158	288	178	227	31,343
January.....1937	130	102	13,975	828	3,673	199	16,230	2,749	278	6,098	382	208	344	22	89	167	583	125	300	46,482
February.....1938	95	57	8,991	338	2,622	109	7,687	1,401	81	3,763	217	562	182	9	19	144	316	138	238	26,969
February.....1937	112	115	7,777	580	4,904	205	16,100	2,987	365	5,136	363	692	305	25	101	215	538	57	292	40,859
March.....1938	110	86	12,233	380	3,666	136	9,898	1,965	77	5,256	352	769	283	17	31	161	394	174	303	36,291
March.....1937	179	140	16,924	815	6,337	236	20,386	4,122	539	5,689	476	1,104	484	23	147	465	847	76	299	59,086
April.....1938	119	127	11,719	393	3,575	136	9,287	1,917	78	4,810	366	757	251	28	43	184	398	175	341	34,672
April.....1937	228	184	21,974	863	3,935	258	22,241	4,671	482	6,710	586	1,143	378	43	118	706	809	107	346	65,782
Four Months...1938	453	334	43,080	1,446	12,933	499	35,986	7,029	335	18,330	1,189	2,756	932	68	120	647	1,396	663	1,109	129,275
Four Months...1937	649	541	60,650	3,086	18,849	898	74,957	14,529	1,654	23,633	1,807	3,147	1,511	113	456	1,553	2,577	365	1,237	212,211
% Change...4 Mos.	−30	−38	−29	−53	−31	−44	−52	−52	−80	−22	−34	−12	−38	−40	−74	−58	−47	+82	−10	−39

* Does not include returns from Wisconsin. All data are comparable.



These Exides fit commercial vehicles as a key fits into a lock

FLEET operators long ago discovered that commercial service and passenger-car service are horses of different colors. Equipment that's ideal for a motorist who drives eight or ten thousand miles a year may not have the qualities needed for the severe conditions encountered in fleet service.

That is why Exide has a special line of batteries for use in commercial vehicles. They are tough, rugged, long-lasting batteries, built for continuous service. Extra-powered for quick starts in any weather. Economical, because of their long life and exceedingly low cost of maintenance.

This line of Exides fits 90% of all commercial vehicles. In addition, there are the regular Exide heavy-duty batteries for large trucks, and a line of special Exides for starting Diesel engines. Your Exide wholesaler can give you full details. If you are interested in Diesel-powered equipment, why not write for the free booklet, "Electric Starting of Diesels"? It gives the facts.

THE ELECTRIC STORAGE BATTERY CO., Philadelphia
The World's Largest Manufacturers of Storage Batteries for Every Purpose
Exide Batteries of Canada, Limited, Toronto

Exide

COMMERCIAL TYPE BATTERIES
WITH MIPOR AND SLOTTED RUBBER

"MIPOR," REG. U. S. PAT. OFF.

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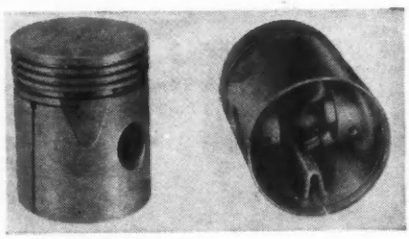
NEW PRODUCTS ON PARADE

Permite Permantrol Piston

A new aluminum alloy piston with a "V-bridge" structure, cast integral with the skirt of the piston, is announced by Aluminum Industries, Inc. The "V" structure bridges the gap in the vertical slot on the minor thrust face, and is said to positively control expansion and contraction and prevent skirt collapse. The design allows slot construction without excessive skirt flexing, which unseats rings, decreases oil mileage and causes blow-by. In addition, the "V-bridge" structure assists in heat transfer, for in joining both sides of the skirt the flow of heat becomes uninterrupted.



AC Kleer Kleen Filter

A new type oil filter for light trucks and passenger cars incorporating a removable element of igneonite material has been developed by the AC Spark Plug division of General Motors. According to the company, it cleans and maintains the original color of the oil, removes dirt and sludge and eliminates the need for frequent oil changes.

Ford Cooling System Cleanser

Introduction of a new cooling system cleanser different from other products now in use has been announced by the Ford Motor Co. The kit comprises two units, a liquid and a powder. While the liquid loosens the rust and scale in the water jackets and radiator core, the powder is added to break these substances into small particles so that they may mix with the water and flow out of the cooling system. The double action of the two products is achieved by adding the powder after the cleansing liquid has been circulating in the hot water for 20 min.

New Travelator Recorder

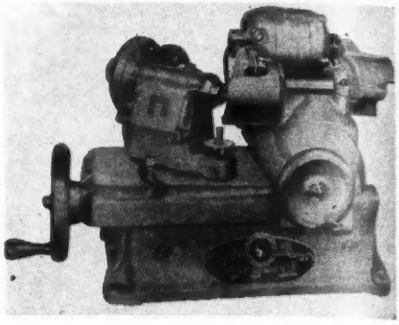
A new vehicle movement and time recorder is being produced by Travelator Inc. It connects directly to the transmission for mileage recording and a simple electrical connection operates the electric clock. The tape attaches to the driver's regular report form and shows the length of stops, the number of stops and the speed between stops. The unit is rugged, compact and tamper-proof.

New Mallory Carburetor

"Mallory Electric Corp. has placed on the market a replacement carburetor embodying a unique mechanical air-valve principle. First production model is a standard 1¼-in. downdraft carburetor package for Chevrolet and Plymouth passenger cars and commercial vehicles. The company plans shortly to release a dual V-8 carburetor package."

Van Dorn Resurfacers

Two new valve resurfacers have been announced by the Van Dorn Electric Tool Co. a wet and dry grinding type, each provided in capacities of 9/16 in. and ⅝ in. Each model features twin motors, fast feed screws, three-point bearing-suspended feed tables and other improvements.



New Sleetex Wiper Blade

The Sleetex Co. announces a new and improved windshield wiper blade, known as Rain-King. It is a balloon-type blade, with inner girder construction to insure longer life, increased tension and permanent tubular shape for the rubber. It is made in passenger, bus and truck sizes, each having a universal connector, to fit all cars.

Kleerust, New Cleaner Item

Kleerust, a new cooling system cleaner which is said to disolve rust from the system and protect all parts for at least one year, has been announced by Sure Rite Products Corp. Except in severe cases it need not be drained, and can be used with anti-freeze.

LITERATURE

Note: These items may be had free by writing direct to the manufacturer

Engine Data from Winterfront

A complete portfolio of technical information pertaining to engine lubrication and deterioration has been made available free to fleet executives by the Pines Winterfront Co., 1135 N. Cicero Ave., Chicago. Papers on all angles pertaining to the subject have been prepared by Spitzglass & Zucrow, consulting engineers, and are bound in loose-leaf form. Supplementary information will be issued from time to time to those who request the book. A highly desirable addition to any fleet man's library.

Goodrich Accessories Catalog

The B. F. Goodrich Co., Akron, Ohio, has just issued a new 135-page catalog containing a complete description of all automotive accessories and tire repair materials which it manufactures or sells. A 94 page section is devoted to fan belt and radiator hose specifications.

Bear Safety Manual

"What Every Service Man Should Know," is the title of a booklet featuring all phases of wheel alignment and safety test work, released by the Bear Mfg. Co., Dept. 10, Rock Island, Ill.

Auto-Lite Spark Plug Data

The Electric Auto-Lite Co., Toledo, Ohio, has a handsome new spark plug data book which contains a wealth of spark plug information, including heat problems, trouble shooting, and gap recommendations.

K-D Catalog and Guide

The K-D Lamp Co., Cincinnati, Ohio. announces a new catalog, No. 38. In addition to illustrating the K-D line it will serve as a ready reference on safety lighting equipment.

"Modern Brakes"

A series of articles entitled "Modern Brakes" and designed to give service men a practical working knowledge of the engineering problems connected with modern brakes is being published by American Brakeblok Co., Detroit. Reprints of the first two articles are available from the company.

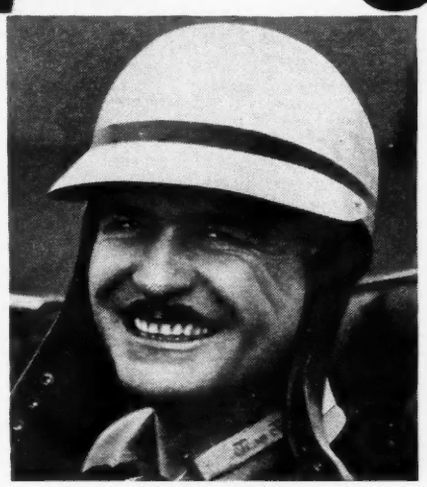
Fairbanks Truck Catalog

Catalog No. 51-69, just released by the Fairbanks Co., 393 Lafayette St., New York, describes the company's full line of hand trucks designed to meet virtually every hauling need.

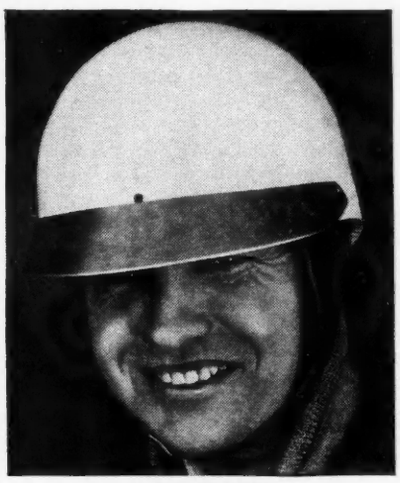
GULF WINS

1st, 2nd, 3rd PLACES AT INDIANAPOLIS!

Winner **FLOYD ROBERTS**
Averaged 117.2 M. P. H. in the 500-mile classic.



WILBUR SHAW
Averaged 115.5 M. P. H. to finish second.



CHET MILLER
Averaged 114.9 M. P. H. to finish third.

Record-breaking drivers use GULFPRIDE OIL!

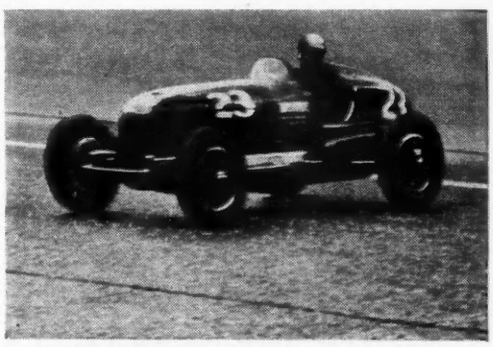
ALL THREE WINNERS of the Indianapolis Memorial Day Race used—not special racing castor oils—but regular, stock Gulfpride . . . certified by the AAA Contest Board to be the identical oil sold by Good Gulf dealers everywhere!

Here's what the winners themselves say about Gulfpride:

"Perfect lubrication provided by Gulfpride Oil played an important part in helping us win first, second, and third places in the 500-mile Memorial Day Race here at Indianapolis. Unfaltering performance of our engines throughout the gruelling race enabled us to attain faster average speeds than ever before have been achieved at this speedway."

(Signed)
FLOYD ROBERTS WILBUR SHAW CHET MILLER

These three all-time record-smashing performances testify to Gulfpride's ability to stand up under punishment. That's why Roberts, Shaw, Miller, and many other prominent racing drivers choose Gulfpride over even special racing oils. The reason is that Gulfpride is the world's only 100% Pure Pennsylvania oil refined by the Alchlor process, *in addition to* conventional methods. *Gulf Oil Corporation . . . Gulf Refining Company, Gulf Bldg., Pittsburgh, Pa.*



FLOYD ROBERTS, setting a new all-time record, used up *less than 2 quarts* of Gulfpride Oil!

GULF

Gulfpride

THE WORLD'S FINEST MOTOR OIL
100% PURE PENNSYLVANIA

NEWS SUMMARY

Truck Production Wanes

Truck production in the United States and Canada during April totaled 48,022, 9 per cent below the March figure of 52,326 and 52 per cent below last April's 100,324. The figure for the first four months of 1938 is 210,245 compared with 344,274 during the same period a year ago, a drop of 39 per cent.

For new truck registrations, see page 38.

ICC Postpones Hours Enforcement

Effectiveness of ICC rules and regulations affecting maximum hours of service of motor carrier employees has been postponed from July 1 to Aug. 1, 1938.

Court Upholds Missouri Tax

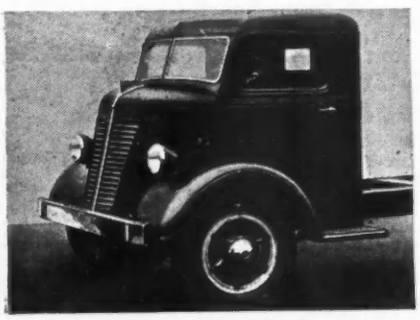
The right of the State of Missouri to impose fees on trucks operating on an interstate basis was upheld recently by a three-judge Federal court decision rendered in Kansas City. The state was challenged by Brashear Freight Lines, Inc., and 40 other interstate carriers, but the court held that the Federal truck and bus law does not prohibit a state from charging a fee on interstate traffic.

ICC Hearing on Rule VIII

Division 5 of the Interstate Commerce Commission has announced a hearing, July 26, for the purpose of receiving testimony and arguments regarding a proposed change in Rule VIII of the Motor Carrier Act, 1935. The rule pertains to the filing and approval of insurance and other forms of security.

Motor Traffic Management

A new book, *Motor Traffic Management*, by H. E. Stocker has just been published by Prentice-Hall, Inc. The author who is assistant professor of transportation at New York University and an ICC practitioner is well qualified for the discussion of such vital subjects as federal regulations, management and a complete comparison of motor vs. railroad transportation particularly in regard to rate structures.



Federal has recently announced price reductions from $35 to $60 on c.o.e. models. An improvement in grille design has been made while the low cab feature remains unchanged

Malcolm P. Feguson (left) was recently named vice-president and general manager of Bendix Products Co., while John P. Mahoney (right) was made the company's vice-president in charge of industrial relations

Ohio Court Upholds Inspections

A far-reaching decision by the Ohio Supreme Court upholds the right of cities to set up Official Inspection Stations as part of an organized safety program. This establishes a precedent which will doubtless be referred to should municipal testing stations in other states be similarly challenged.

Ford Service Bulletin

A 300-page service bulletin covering all details of Ford cars and trucks as well as Lincoln and Lincoln-Zephyr cars has been released by the Ford Motor Co. It is in loose-leaf form and is available at cost of the binder alone from Ford branches and parts jobbers.

United Parcel Safety Awards

United Parcel Service, New York, has awarded prizes to 21 drivers who have had no accidents for five years or more. Under the company's accident-reduction plan drivers with a perfect record for five years get a gold watch and $50 a year for each additional year the record is kept intact.

S.A.E. Meeting Dates

The National Transportation Engineering Meeting of the Society of Automotive Engineers will be held at the Commodore Hotel, New York, Nov. 14 to 16 The S.A.E. annual meeting in Detroit is scheduled Jan. 9 to 13.

ATA's New Headquarters

The American Trucking Associations, Inc., is established in its new home at 1013 16th St., N.W., Washington, D. C. A. formal opening was held June 15.

U. S. Court Upholds Gas Law

The Arkansas law making it unlawful to operate a vehicle over state roads when carrying more than 20 gal. of gasoline, unless the State tax of 6½ cents per gal. shall first have been paid, was upheld in the U. S. District Court.

Mr. Fleming's Right

Harry Fleming of Warner Electric Brake Mfg. Co. has called us on an error in the April issue. Under the heading "Safety Equipment Regulations" it was stated that Arkansas, Florida and Michigan required the use of air or vacuum operated brakes on certain vehicle classifications. So they did at one time, but amendments permit electric brakes in each instance. Mr. Fleming, our apologies.

APPOINTMENTS

Appointment of Forrest H. Akers, as vice-president in charge of sales of Dodge Division of Chrysler Corp., and of Frank J. Timmens, as general sales manager, was announced recently.

Al J. Greenough, for the past four years truck manager of M. J. Lanahan, Chicago Dodge distributor, has been named manager of the Federal Chicago branch.

Eugene B. Powell has been appointed regional sales manager of the AC Spark Plug division of General Motors, with headquarters in Dallas. He succeeds T. R. Middlekauff.

W. R. Spiller has recently become affiliated with the Timken-Detroit Axel Co. as sales engineer. He was formerly chief engineer of the White Motor Co.

William J. Lynch, Jr., has been named as general counsel and business manager of the Cartage Exchange of Chicago. He succeeds Curtis A. Stewart, resigned.

W. E. Mill has joined the American Bantam Car Co., as Branch Manager, with headquarters at the factory in Butler.

Mr. Mill came to Bantam from the Federal Truck Company where he was New York Regional Manager.

Paul R. Martin, formerly with Chevrolet has joined the Studebaker sales staff with special assignments in the middle west

Walter K. Dow has been elected vice-president of The Alexander Milburn Co.

Magnus Chemical Co. has named the following as sales representatives: Carl Geyer, Ohio and W. Va.; Ralph Neely, Calif.; Carl Steinberg, Pa.

John Bass, formerly of the New York office of The Trailer Co. of America, heads the Atlantic Trailer & Equipment Co., Inc., Albany, N. Y., distributors for Lapeer and Trailmobile trailers.

George G. Young was elected president of Scott Brothers and subsidiary companies in Philadelphia succeeding the late Joseph L. Scott who died on May 2.

How would you like an 80% INCREASE in TIRE MILEAGE?

MAYBE 80% greater mileage sounds like too much to hope for. But read below what other truckers are getting with Goodyear's great new YKL tire—reports typical of hundreds—and draw your own conclusions.

And get this—these cost-smashing increases are being made on the toughest hauls, on the heavily overloaded runs that generate fever heat in tires and cause premature failure.

First New Thing in Truck Tires in 20 Years!

This new Goodyear YKL is able to deliver such sensational performance *because it is made with a Rayotwist body — and treaded with a tougher rubber compound than any other truck tire could carry.*

Rayotwist is a new Goodyear discovery that's the first big development in truck tire construction since the introduction of the first pneumatic truck tire.

So tough is this Rayotwist carcass that some operators are finding they can retread or recap YKL's as many as *four* or *five* times—reducing tire cost to an all-time low!

No matter what other truck tires have done for you—*the Goodyear YKL will do it better!*

YKL performance speaks *louder than words*

"Stepped up our truck tire mileage 94% with Goodyear YKL"—Cassell Transfer & Storage Company, Wichita.

"Doubled our mileage with YKL's"—Gordon's Country Club Beverage Company, Des Moines.

"Better than 100% increase from YKL's"—Nick Laine Sons, Inc., Utica, New York.

"Our mileage jumped from 15,000 maximum to over 35,000 with YKL's"—Moncrief-Lenoir Manufacturing Co., Dallas, Texas.

"60% reduction in operating cost since changing to Goodyear YKL's"—Atlas Fish & Produce Co., Greensboro, N. C.

THE GREATEST NAME IN RUBBER

GOODYEAR

MORE TONS ARE HAULED ON GOODYEAR TRUCK TIRES THAN ON ANY OTHER KIND

When writing to advertisers please mention Commercial Car Journal

TIME

(CONTINUED FROM PAGE 21)

care of making the spark occur earlier. But it is operated by the speed of the engine. Hence, if the spark is badly timed, the automatic advance will not correct it because it starts from the wrong point. The spark will simply be badly timed throughout the entire range of the advance mechanism.

In order to make spark timing easier, some engines have a mark on the flywheel which can be seen through a peep hole and aligned with an indicator on the flywheel housing. According to factory procedure the spark should be set to occur when this mark aligns itself with the indicator. Many engines do not have the peep hole and instructions for ignition involve more cumbersome methods.

Two methods have been used to synchronize the spark with the flywheel markings. One is the use of a light on the low tension system connected with the switch to distributor low tension wire and grounded. The light lights when the contact points separate and cause the spark. Theoretically, this method will give an accurate timing, but practically it works out none too accurately. Different mechanics will more times than not get different timing with this method. This is due mostly to mechanical skill. But there is also the fact that this method does not take into account the lash in the distributor drive line.

Another more accurate method is to use the stroboscope or neon flasher wired to a spark plug which will show up a chalked factory marking on the flywheel when the engine is in operation. This equipment and method can also be used to check the automatic advance when the limit of the range is marked on the flywheel. This method is excellent and will give the factory-recommended setting.

However, there is one serious flaw in the idea of setting the spark to a factory-recommended setting without considering other things. In determining the setting recommended, the engine designer had to guess at the qualities of the fuels which would be used in the engine. Since fuels vary quite widely he had to compromise, and so his recommendation was the best average for the entire range of fuels which were likely to be used. This being the case, the setting was not exact for a particular fuel.

The reason that fuels influence timing is because different fuels require different periods of time to reach maximum combustion after they have been ignited. Hence it is only reasonable that for best results the spark should be set to the fuel that is being used. This would call for disregard of the factory setting, at least to a degree. This may seem like a dangerous precedent but it appears to be justified in this case of timing.

Speedometer Method

This brings us around to a method of timing the engine to the fuel that does not call for any special equipment nor any particular skill. It can be performed in any shop, probably at a saving in time over the method now in use. It should give the most advanced timing possible and this should result in better performance and in improved fuel economy. Fol-

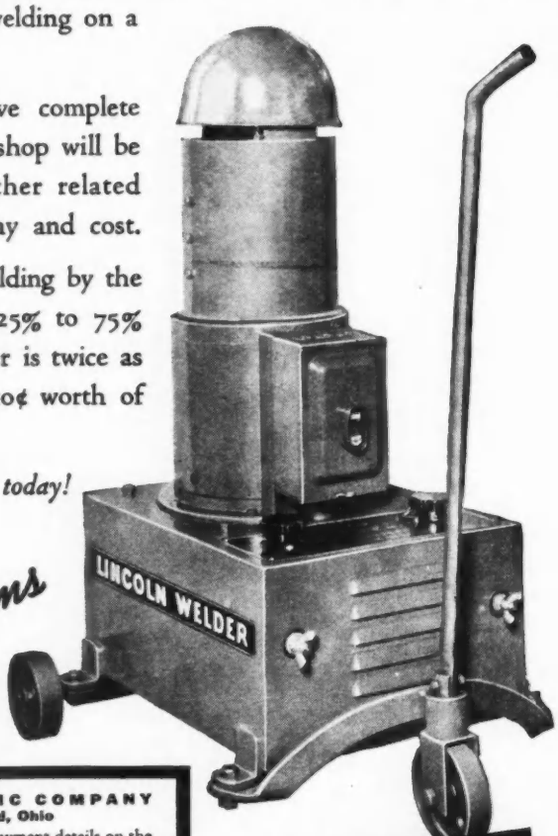
You can save $100 to $300 monthly with this Lincoln Fleet Repair Welder because:

1 This Lincoln Welder (of d. c. motor generator type) enables you to weld all kinds of work including bodies, frames, axles, bumpers, gears, bronze bushings, tool steel, stainless steel, aluminum and cast iron parts. You get the savings of welding on a greater number of jobs.

2 By being able to give complete welding service, your shop will be able to turn out the other related repair jobs with less delay and cost.

3 You cut the cost of welding by the conventional process 25% to 75% because this electric welder is twice as fast and uses less than 10¢ worth of power per hour.

Mail the coupon for details today!



New Low Prices with Terms

THE LINCOLN ELECTRIC COMPANY
Dept. AF-503, Cleveland, Ohio

Send a free copy of Bul. 314 and payment details on the Lincoln Fleet Repair Shop Welder.

Name _____ Position _____

Company _____

Address _____

City _____ State _____

LINCOLN
LARGEST MANUFACTURERS OF ARC WELDING EQUIPMENT IN THE WORLD

1,000,000-Mile Mack Still Going Strong

Averages 350 Miles per Day—360 Days per Year—For 9 Years

Unretouched Photo taken May 27th, 1938

Total Repair Cost ¼ of a Cent Per Mile

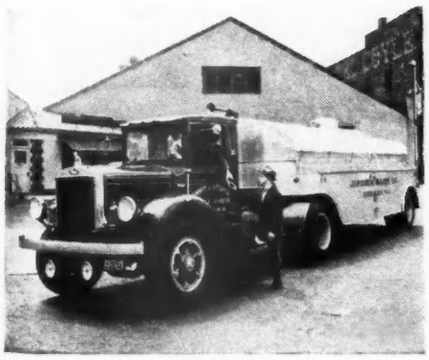
Proof — in facts and figures — of Mack's unequalled stamina, dependability, and long-run economy! Starting a contract milk haul between Scranton, Pa., and New York City, Thomas F. Palmer in 1929 purchased a Mack Model BJ tanker. A few months ago, Mr. Palmer proudly reported that this Mack had amassed a total of 1,134,000 miles of money-saving trucking.

Working on a 24-hour schedule, this Mack hauled 1,600 gallons of milk daily, seven days a week for Palmer Transfer. Total repair cost during the entire nine-year period was $2,911.28 which figures out to the remarkably low cost of ¼ of a cent per mile.

In buying a new Mack tractor, Mr. Palmer reluctantly traded in this road veteran, and it is now starting on its second million miles, in the service of Yeast Products Company of Passaic, N. J.

Other Macks in Fleet also Mileage Veterans

The whole Palmer fleet of ten Macks offers sensational testimony of Mack value. The Mack BX tractor shown at left is now five years old, and has covered 550,000 miles to date at a cost of ⅛ of a cent per mile. And look at this maintenance record — three Macks which have covered 88,000, 79,000, and 45,000 miles each, have a total repair bill for all three of only $50.00!



Why we say: "Macks are cheapest in the long run"

THE Mack Model BJ, illustrated above, had been operated 440,000 miles the day this picture was taken! It is still rendering lowest cost mileage for Palmer's Transfer of Scranton, Pa., and is good for countless dependable miles to come.
Many Mack Trucks operated for milk hauling equal or better this record. That such instances are common under the severe operating conditions in the New York Milk-shed demonstrates that Macks are the best investment. Dividends in long life and low milk distribution costs make it so in the end.
Mack
MACK TRUCKS, INC. BROADWAY NEW YORK CITY

Makes Good on 1933 Promise

Reproduced above is an advertisement showing the Mack "Million Miler" as it appeared late in 1933. At that time we said, ". . . It is still rendering lowest cost mileage for Palmer Transfer . . . and is good for countless dependable miles to come." Again Mack backed up claims with performance!

See the new 1938 Macks — including three lighter-weight, lower-price models which bring Mack quality within reach of every hauler.

MACK TRUCKS, INC. • NEW YORK, N. Y.

lowing is the method, step by step:

1. Warm engine up thoroughly and jack up rear end.

2. Remove spark plug wire from every other cylinder in firing order. (Thus if the firing order is 1-5-3-6-2-4, the wires would be removed from 5, 6 and 4.)

3. Start engine and shift into high gear.

4. Set throttle for 30 m.p.h.

5. Adjust distributor to obtain highest speed on speedometer without touching throttle.

6. Lock distributor and road test.

This method can be made somewhat simpler by using an electrical tachometer and reading engine speed instead of jacking up the truck and using the speedometer.

The object of shorting out every other spark plug in the firing order is to have half of the cylinders act as a compression load so that the engine will not be timed idling, thus eliminating the danger of an early spark.

The timing was set with this method on a number of vehicles by staff men of COMMERCIAL CAR JOURNAL and in almost every case the result was excellent performance without "pinging." One or two vehicles that did show a spark knock on road test were suspected of having either heavy carbon accumulations or weak advance springs in the distributor. These suspicions were not checked due to lack of equipment and time when the settings were made.

In making the spark adjustment on trucks that had been carefully timed with either the low-tension light or the stroboscope, it was found that the method outlined above in some cases increased the speed 2½ m.p.h., without touching the throttle. The throttle was set at 30 m.p.h. and the distributor turned first to the late position and then to the early position and locked at the position that gave the highest speedometer reading. This frequently reached 32½ m.p.h. Because the throttle had not been touched since its original setting it was obvious that the same amount of fuel was being consumed but the engine was operating more efficiently since more miles per hour were being produced with the same load and the same amount of fuel.

On any basis of logic it was certain that more power was produced without greater fuel consumption. Therefore, there was available for use more power from the same engine. It naturally follows that if the engine were used to do the same amount of work at the same rate before and after timing, the fuel consumption would be reduced.

Several fleets timed their vehicles by this method recently and when enough time has elapsed to provide for comparative fuel consumption figures, COMMERCIAL CAR JOURNAL will report on them. Power increases seemed to be evident to observers who rode the trucks before and after timing by this method but since none of the fleets has a dynamometer available, a positive statement giving any percentage of power increase is impossible.

Claim Prevention Booklet

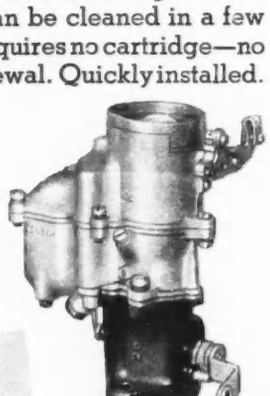
"Do You Know?" is the title of an informative booklet on rules and instructions for employees of motor freight companies. Published and distributed free by the National Claim Prevention Service, 25 S. 6th St., Terre Haute, Ind., the 20-page booklet is filled with information of importance to every freight employee.

THIS IS NO "Creampuff" CARBURETOR— IT'S TOUGH AND STINGY BOTH!

THIS Zenith Carburetor is a tough hombre from way back! It was built for the rough and ready life. That's why a Zenith will still be performing long after a "creampuff" carburetor has been followed by a second and even a third generation!

Leading truck engineers choose Zenith as factory equipment because they can stand the gaff. Their efficiency extends through the whole operating range—from idling to open throttle. At any speed, Zenith's power jet system assures maximum pull and power. Check Zenith's performance, in your own trucks, against any other carburetor. You'll find Zenith gives more mileage, too.

Every truck—every carburetor—needs the protection of Zenith Heavy Duty Fuel Filter. It is 2½ times as efficient as average screen filtration. Can be cleaned in a few moments. Requires no cartridge—no packing renewal. Quickly installed.



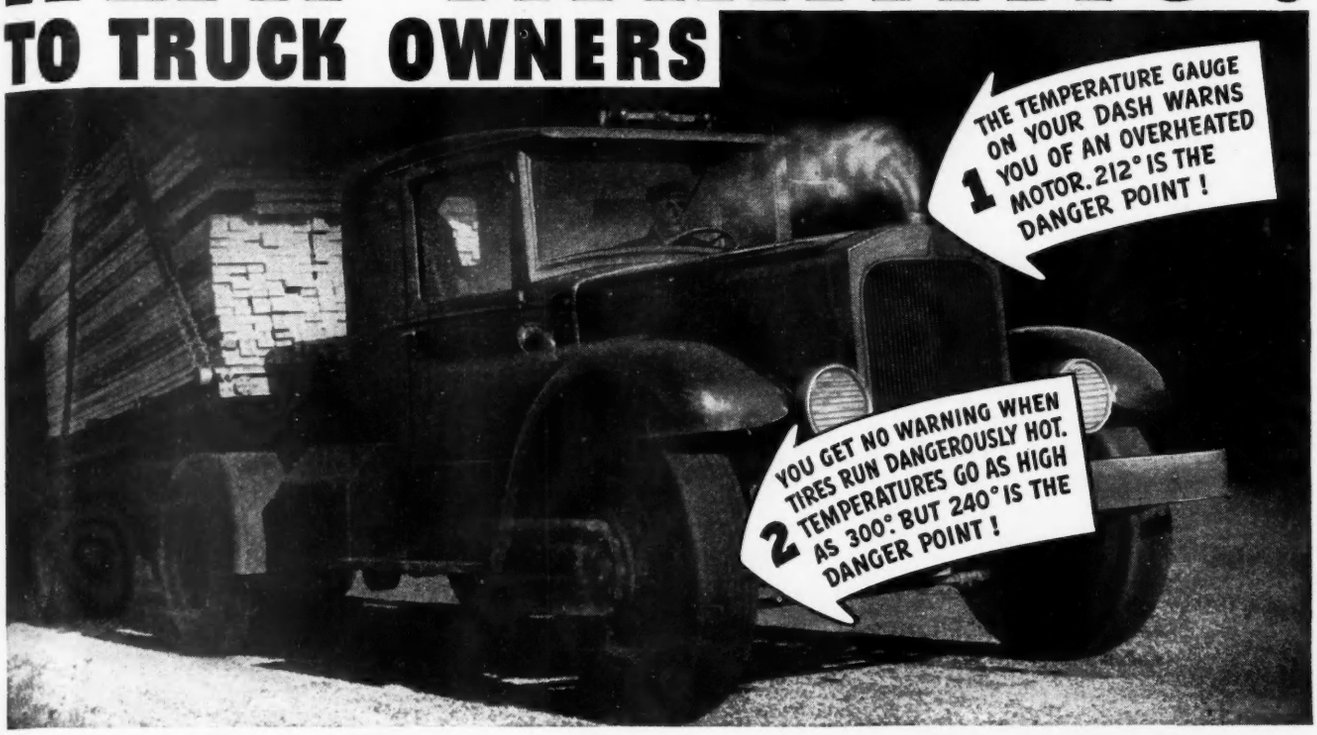
ZENITH
CARBURETORS

Built for Permanence — Z — Calibrated for Performance

ZENITH CARBURETOR COMPANY
(*Subsidiary of Bendix Aviation Corporation*)
696 Hart Avenue, Detroit, Michigan
Send particulars regarding Zenith Carburetors and Zenith Fuel Filters for following engines:
Make and model of vehicle .....
Name .....
Street Address ..... State .....
City .....
Nature of Business .....

HEAT WARNING!

TO TRUCK OWNERS


1 THE TEMPERATURE GAUGE ON YOUR DASH WARNS YOU OF AN OVERHEATED MOTOR. 212° IS THE DANGER POINT!
2 YOU GET NO WARNING WHEN TIRES RUN DANGEROUSLY HOT. TEMPERATURES GO AS HIGH AS 300°. BUT 240° IS THE DANGER POINT!

Read How These New COOLER-RUNNING Goodrich Tires Protect You and Your Profits

• Now you can protect yourself against the dangers caused by truck tires running excessively hot. And HOT is the word for it!

Today's loads and today's speeds send tire temperatures skyrocketing. Inside the carcass you will often find sizzling rubber hotter than boiling water. Temperatures up to 300°. Yet the danger line is about 240°. Higher sustained temperatures make tires "grow," cause blow-outs, premature failures.

Goodrich has licked this problem with a tire that does *not* run dangerously hot—a tire built to withstand the heat generated by heavy loads and high speeds. It's a tire that, on the "blow-out runs," has actually lasted two and three times longer!

NEW KIND OF CORD!

Engineers invented a new way to make tire cord. They used pure American cotton, processed it to make it more compact, stronger, more elastic.

They call it Hi-Flex Cord because it resists the damaging results of constant flexing. It's an amazing type of cord that can take the sledge-hammer blows of the highway without losing its strength and elasticity. It doesn't get lifeless like ordinary cord. Doesn't stretch and become longer, permitting the tire to "grow."

This long-life cord makes it possible for Goodrich to build a super-strong tire. Yet a tire that does not depend on thickness alone for its strength. It's a compact tire that runs *cooler*—stays below the temperature danger point.

PRACTICALLY ELIMINATES SIDEWALL BREAKS

No wonder we can say that this new tire practically eliminates sidewall breaks! For Hi-Flex Cord, combined with two other great Goodrich developments, provides Triple Protection. *No other tire* gives you these three features:

1 **PLYFLEX**—a tough outer ply which distributes stresses throughout the tire and prevents local weakness.

2 **PLY-LOCK**—a new method of locking the plies about the beads, anchoring them in place.

3 **HI-FLEX CORD**—full-floated in live rubber—cord that retains its strength and protects the tire against getting dangerously hot.

And here's proof of how good these tires really are. They have been run on tire-killing truck jobs where other tires failed—tested on high-speed cross-country bus runs. And the revolutionary new Goodrich tires actually ran two and three times longer than the best tires used before!

NO EXTRA COST

You can now get these *same* tires for *your* trucks. Use them on any haul. Save on every mile. They are premium-built tires but they carry no premium price. Call a Goodrich dealer or Goodrich Silvertown Store for prices.

Goodrich *Triple Protected* **Silvertowns**

SPECIFY THESE NEW SILVERTOWN TIRES FOR TRUCKS AND BUSES

When writing to advertisers please mention Commercial Car Journal

MIX

(CONTINUED FROM PAGE 29)

firm must also have a maintenance department that is part man, part elephant and part gazelle.

The truck maintenance department of the Camden Lime Co., under the supervision of Rowland Haines, is such a hybrid. The elephant is in the form of a ponderous home-assembled repair truck, with a derrick boom and a motor operated drum carrying 300 ft. of steel cable. This pachyderm can toss the company's 40,000 lb. jobs around like so many dingbats. Its most active season is the spring, yanking trucks out of the mud. Concrete hauls are often routed over terrain where other vehicles would fear to tread. When one gets mired down, it has to be jerked out in a hurry.

The swifter and equally useful piece of equipment is the "fast wagon," a light panel truck which burns up the road at the first cry of distress. This service car carries everything necessary for making light repairs on the road. Racks have been built against the cab wall to hold spare magnetos, fuel pumps, distributors, etc., everything to repair either the truck motor itself or the auxiliary engine that turns the agitators on some of the lighter jobs. Spare cables, batteries, chains and drive shafts are clamped along the sides. A 20-ton jack and a foam type fire extinguisher are included in the equipment, as well as a light work bench which can be folded from the rear and on which may be fastened a vise. Flood and extension lights are available for night work. Everything is keyed to give immediate aid to any truck that might have road trouble.

The main function of the maintenance department, however, is to keep the 27 trucks of the company in first class operating condition, so that road calls will be few and far between, and trouble can be corrected in the shortest time possible. This means frequent inspections and periodic overhauls.

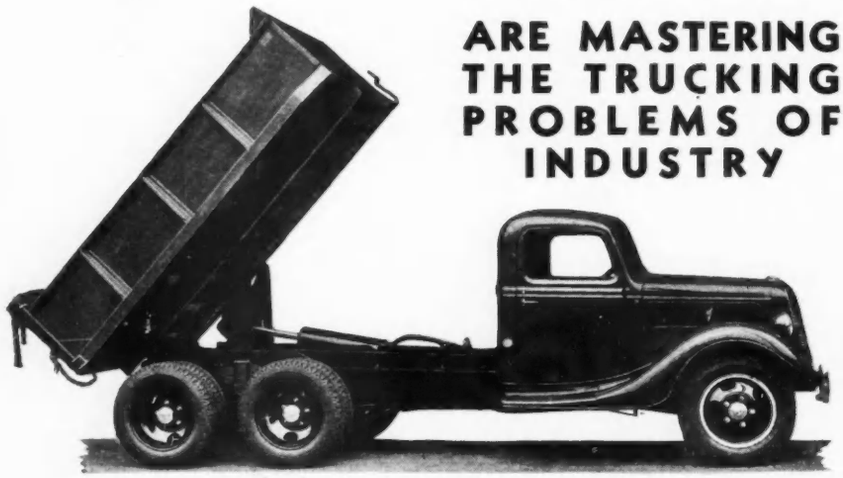
Routine Tests Keep Motors Up

Routine inspections are made every time the trucks come in for greasing, at least once each month. At this time minor repairs are made. When time allows the motor is tested for economical operation by an exhaust gas analyzer and the dwell of the distributor points are checked with a cam angle meter. In connection with distributor adjustment, Mr. Haines has found that a set of circular files are an invaluable means of securing more permanent alignment of new contact arms. One of these hollow files fits snugly over each size of distributor shaft. A few turns by hand and the file cuts the fiber on the new contact arm so that its surface is absolutely parallel with that of the shaft. Thus, as is often the case, if the rigid shaft holding the contact arm is slightly out of line, the edge of the new fiber is compensated for it and will not rub at one point, with the subsequent effect of soon throwing the points out of adjustment.

In hauling concrete, trucks are called upon to do a lot of low gear work. An actual mileage record of the vehicle, therefore, gives little indication of engine wear. Mr. Haines relies on periodic tests of his motors with compressed air, to tell him when an engine needs repairing. This test

(TURN TO PAGE 51, PLEASE)

Warford DUAL-AXLE-DRIVE TRUCKS ARE MASTERING THE TRUCKING PROBLEMS OF INDUSTRY



No better evidence of WARFORD'S ability to serve the transportation needs of industry can be found than the ever increasing number of WARFORD TRUCKS on the highways and by-ways of the country. Month after month, through rain and snow and mud and muck and mire—over good roads and bad roads WARFORD TRUCKS carry on, faithfully serving their owners, delivering their loads at appointed destinations without regard to adverse road and weather conditions.

The WARFORD Dual-Axle-Drive-Multi-Wheeler is . . THE investment for your dollars. It answers your demand for lower costs in heavy hauling truck operations. Ask the owners of WARFORD TRUCKS about performance under any and all conditions . . . Abide by their experience and see your local dealer or nearest WARFORD distributor.

MORE TONS • MORE MILES • LESS COST

THE WARFORD CORPORATION
14 WHITEHALL STREET, NEW YORK, N. Y.

BIG SAVING
In Switch to New Kind of
SPARK PLUG

"You Have What Every One of Us Has Been Looking For!"

Says G. C. McMAKIN, Lubbock, Texas
President, McMAKIN MOTOR COACHES

Motorists Everywhere Report Sensational New Type Spark Plugs Give Remarkable NEW PEP . . . POWER . . . AND GAS MILEAGE

G. C. McMakin, Lubbock, Texas, is an official of two of the largest bus companies of the Southwest—McMakin Motor Coaches and South Plains Motor Coaches.

When he tells you that a set of Auto-Lite Spark Plugs installed in the motor of one of his buses that travels 664 miles every day, have gone 14,231 miles with minimum attention and *with no failures,* it should help you decide *which spark plug to buy!*

Until he switched to Auto-Lites, Mr. McMakin declares he was *installing new plugs every 2,000 miles!*

Auto-Lite *ignition* engineers *have* developed a *new kind* of spark plug that brings out the best in any motor.

Its new Konium electrode with "geometric" gap design produces a spark at reduced voltages—increases the firing certainty of the entire ignition system—*saves gasoline!*

Its new Ziramic insulator resists heat shock, electrical shock and mechanical abuse as no other insulator ever has! See the evidence in Mr. McMakin's letter.

Read this letter

McMakin Motor Coaches
G. C. McMAKIN, PRESIDENT
Lubbock, Texas

Electric Auto-Lite Co.
Toledo, Ohio

May 6, 1938

Gentlemen,

April 2nd of this year we were persuaded to try a set of Auto-Lite spark plugs in a 16A, 28 passenger pug nose White Bus. We have been installing a new set of plugs every two thousand (2000) miles, due to plug failure. First one make and another. I was interested to see myself just what you folks had.

This bus is on a regular run, Odessa, Lubbock and Vernon, and makes 664 miles a round trip every day. Auto-Lites were installed at 111,000 miles and May 4th, we had 125,231 miles on the speedometer. Other than cleaning and re-setting the gaps twice, we have done nothing, and they are still going strong.

We have some fifty pieces of equipment in the Fleet, Chevrolets, Whites, Internationals and Yellows, and with this service record are immediately swinging to Auto-Lite 100%.

Certainly we wish to thank the party responsible for suggesting this new plug, for it has cut our plug cost to a minimum and has given us better performance than we have ever had before.

It is a pleasure to endorse Auto-Lite spark plugs to anyone, as I feel you have what every one of us has been looking for.

Very truly yours,

Mc MAKIN MOTOR COACHES.

By G. C. McMakin
President

GCM/WSH

Ask for **AUTO-LITE SPARK PLUGS**

When writing to advertisers please mention Commercial Car Journal

Nothing STOPS a Truck

. . . MORE QUICKLY OR SAFELY THAN AMERICAN BRAKEBLOK!

● Drivers like American Brakeblok because it will stop even the most heavily loaded truck smoothly and safely—rain or shine.

Maintenance superintendents are enthusiastic about American Brakeblok because it seldom needs adjustment, and because it wears so much longer than ordinary linings. Saves important money on upkeep and replacements.

Owners like American Brakeblok because it protects payloads—and profits!

A trial installation of American Brakeblok on one or more of your units in severe service will prove to you what a big difference it can make in braking efficiency and economy.

American Brakeblok is available in rolls or boxed sets for every truck requirement.

AMERICAN BRAKEBLOK, 4600 MERRITT AVE., DETROIT, MICH., Division of American Brake Shoe and Foundry Co.

(CONTINUED FROM PAGE 48)

is made individually on each cylinder through the spark plug hole. The apparatus consists of a hand instrument which is attached to the end of an air line. One end of this instrument contains a rubber cone which may be pushed tightly into the spark plug hole, and through which air is admitted. A short rubber hose connects this instrument with a meter that indicates the per cent of air leakage in the cylinder being tested. Any reasonable air pressure can be used, as it is possible to compensate for pressure variations by adjusting the zero reading of the meter.

To check a motor, the crankshaft is turned until the valves in the cylinder under test are tightly closed. Air is then admitted and the reading of the meter noted. A leakage of less than 15 per cent is considered good. A leakage of 15 to 25 per cent, if past the rings, is fair. Any greater leakage is poor enough to warrant an overhaul. Mr. Haines never lets his motors get below the fair indication.

While the air is in the cylinder, a stethoscope is used to determine just where the leakage occurs. If air is heard hissing through the oil inlet, the leakage is past the rings. If the carbureter indicates an air escape, the leakage is past the inlet valve. When air is heard in the exhaust, it is the exhaust valve that is leaking. Or when air is heard bubbling through the water in the radiator, it is known that the gasket has blown somewhere between the cylinder and its water jacket.

By keeping a sustained pressure on the cylinder, the mechanic is allowed plenty of time to investigate the source of leakage. Then, after the actual source of trouble is known, a more intelligent record can be kept to determine just when the engine needs tearing down. For instance, a 20 per cent leakage past the rings is bad, but not serious enough to require an immediate overhaul. On the other hand, such a leakage past one of the valves would demand immediate attention.

A careful record of these periodic motor tests with compressed air permits Mr. Haines to intelligently plan his overhaul periods and at the same time catch any abnormal development that might occur long before the motor should be scheduled for reconditioning. In an emergency, or when a truck is needed in a hurry, there are two spare motors that can be lifted directly into the waiting truck. A complete engine change can be made in less than half a day.

Filters and Good Oil Are Rule

Appreciating the value that lubrication plays in heavy duty truck work, Mr. Haines has run a series of tests to determine the most effective lubricating method suitable for his type of equipment. Over an extended period of time he has been using four different kinds of oil and three different makes of filters. On some trucks the oil was changed every thousand miles. On others it was not changed until the engine was overhauled. All of these tests were run on several motors at a time, so as to eliminate any exceptional conditions.

The oil question has been settled, and the highest grade of oil tested is now standard with the Camden Lime fleet. When the price is down, Mr. Haines buys this oil in drums by the carload lot, and stores it in the

SIMMONS
Silver King
HYDRAULIC
JACKS
"Give you the lift you need"
Compact and Powerful
Silver Kings are built in a complete range of sizes for cars, busses and trucks as well as for industrial applications. Many large operators have standardized on Silver Kings after checking performance under a wide range of operating conditions.
Silver Kings get under the load and lift it. They have a higher lift because the ram is piloted from below the compression cup leather, in a pressure cylinder which is anchored top and bottom.
An automatic breather plug cuts down size of oil reservoir in the one-piece body casting and enables the Simmons patented pyramid construction to still further economize on space.
Factory tested for power and strength to handle loads in excess of rated capacity.
for
Busses--Trucks
Passenger Cars
and
Industrial Uses
Capacities from
1½ to 30 Tons
Model
800
FLOOR JACK
Simmons floor jacks are engineered for rugged compactness and extra high lift with full power. 2-ton and 5-ton sizes handle practically any lifting job. Rated far below actual tested capacities.
The SIMMONS
MANUFACTURING Co.
ASHLAND, OHIO
Manufacturers of Silver King and Power King Hydraulic Jacks; Mufflers for all cars; Carburetors for all cars; replacement parts for Ford, Chevrolet and Plymouth.
SEND NEW JACK CATALOG TO:
NAME
ADDRESS
CITY

company's warehouse. When oil is needed, a drum is lowered to a truck, conveyed to the shop, its contents drained into the service tank and the empty drum returned to the warehouse. The entire operation is done without removing the drum from the truck.

Tests with high grade oil filters are still being made. However, results indicate that one type of filter, which includes a feature to remove the acidity of burnt oil, will become standard equipment. The oil will not be changed from one overhaul period to the next. Because of the heavy duty required of the trucks, it is necessary to add oil frequently in order to maintain the proper level. Mr. Haines' tests indicate that under such conditions, when a good filter is used, there is no advantage in draining the crankcases at certain intervals. The period for changing the filter cartridges is determined by the appearance of the oil, rather than from a mileage standpoint, because of the excessive low gear work.

Wet concrete is not the nicest thing to spill on a truck chassis. However, drip pans under the agitators would soon fill up with a solid mass of drippings, and would otherwise prove a general nuisance. The trucks of the Camden Lime, therefore, are open beneath the agitators, so that drippings from the drum fall to the road. Naturally, much of this lands on the frame, springs, brake drums and cables. It is up to each driver to keep his truck clean. This often means washing the undercarriage every night, with water hose and wire brush. As long as the concrete is not allowed to dry in several successive layers, it is relatively easy to remove. The service department keeps the spring shackles filled solid with heavy grease, to keep particles of cement from working into the bearing surfaces.

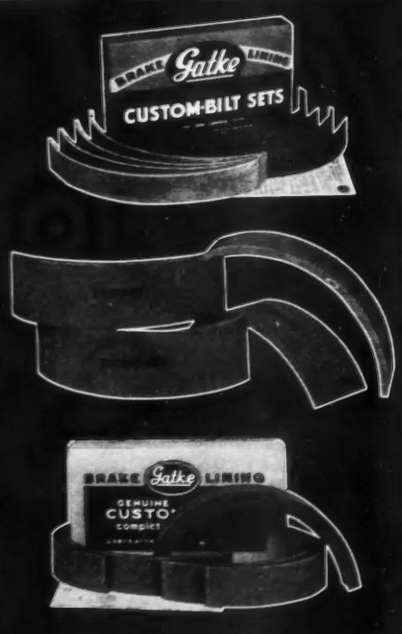
Most of the trucks are housed in a long, narrow garage with individual entrances. The floor of the garage slopes toward the entrance, so that, in case of fire or other emergency, the trucks can be rolled out.

The truck fleet of the Camden Lime Co. consists of 18 vehicles equipped with 6 and 4 yd. agitators, 6 dump trucks, one flat truck, a panel truck and a wrecker. This fleet is maintained by Mr. Haines, three mechanics and one helper.

GATKE BRAKE BLOCKS Give You The POWER to STOP—

WHEN YOU NEED IT MOST!

When emergencies like this spring out of the dark, GATKE GENUINE CUSTOM-BILT BRAKE BLOCK SETS provide *Dependable Stopping Power*—keep your equipment under control at all times. They are *performance proven—assure safe, quick, smooth stops* under all conditions, hot or cold, wet or dry.



For Safety and lower maintenance costs, ask your GATKE Jobber or write for material recommendations and detailed information.

GATKE CORPORATION
228 N. La Salle St. Chicago, Ill.

CCJ Quiz Answers

1. 18,500 lb. (The June issue weighed 9½ oz. per copy. 31,000 were printed.)
2. Faster on the upper half of the stroke. (In 90 deg. of crankshaft travel from top center the effective length of the connecting rod is shortened, therefore the piston travels more than half the stroke during half the crankshaft stroke which makes the piston travel faster during the upper half of the stroke.)
3. C. F. Kettering. (At present vice-president of General Motors in charge of research.)
4. M.P.H. (RPM is revolutions per minute of the engine. R is rolling radius. 168 is a constant and FGR is final gear ratio.)
5. 25,000 operators. (Authority—COMMERCIAL CAR JOURNAL list department.)
6. Gone Bankrupt. (77 B is a section of the National Bankruptcy Law.)
7. He would be working on the extra list at the union hall.
8. T was the next letter in the alphabet. (Previous year the company produced models K, N, R, S)
9. C. W. Spicer who is also vice-president of Spicer Mfg. Corp.
10. Society of Automotive Engineers.

FOR MAXIMUM ECONOMY

Under the strict surveillance of the AAA Contest Board, 26 stock cars recently left Los Angeles for Yosemite National Park, 314.5 miles away. The one aim of the third annual Gilmore-Yosemite Economy Run was to extract the most miles per gallon out of every gallon of gas.

Though the route is not conducive to good mileage, including as it does, 100 miles of winding mountain highway and climbs reaching an elevation of over 6,000 feet, the "stingy drivers," as they are known, furnished proof positive that engines equipped with Champion Spark Plugs get maximum miles per gallon.

The Sweepstakes winner in this event set a new record with Champion Spark Plugs. Eight out of ten first places in various classes went to Champion-equipped cars.

For maximum economy, equip all your trucks, buses and cars with Champion Spark Plugs and you'll quickly save their cost in extra gas mileage. You can always depend on Champions for maximum economy.

THE SPARK PLUG CHAMPIONS USE

CHECK AND CLEAN SPARK PLUGS WHEN YOU CHANGE OIL

When writing to advertisers please mention Commercial Car Journal

GUZZLERS

(CONTINUED FROM PAGE 23)

erably keeping the level on the low side and at no time allowing it to reach the high side of the specification.

3. Many carburetors have vacuum operated accelerating systems or power jet systems, yet few shops are equipped to make a check of the actual operation of the vacuum piston. For this reason, there has been included in the drawing of the test stand a vacuum pump and gage to enable careful checking of vacuum systems. After many thousand miles of service these pistons are bound to wear and may become entirely inoperative or just partially so. Here again, with the carburetor on the test stand, the vacuum accelerating system can be put into actual operation and the discharge of the fuel measured and compared with factory specifications.

It is difficult to judge accurately the proper idle air fuel ratio of an engine. Many commercial engines will idle satisfactorily from a very rich idle to a rather lean idle. For best economy it is desirable to work as near to the lean position as is possible and still obtain a non-stalling idle and a satisfactory cross-over from the idle position. The use of a vacuum gage is desirable but it is possible, with the use of the gage alone, to obtain an idle on the rich side. Therefore, the use of exhaust gas analysis as a means of properly setting the idle is advised. It, of course, requires time to set an idle properly by this means, yet the savings effected, first by proper float levels and second by correct idle air fuel ratios, will more than compensate for the time spent.

Many city operators are faced with the problem of exhaust gas fumes and should take the above recommendations to heart in order to make the first logical steps towards the solution of their problem. Other points to watch in a desire to reduce fuming complaints are:

a. Clean intake manifolds.

b. Clean intake ports in the cylinder head.

c. Intake manifold temperatures.

d. Exhaust manifold hot spots which may be plugged with carbon.

5. One rather serious problem is the attempt of those working on fleet carburetors to redesign or recalibrate the carburetor to a setting which meets their own personal ideas of what a carburetor should do. It is true that manufacturers have often placed engines in service with a carburetor calibration not suitable for the particular type of service in which it is being used. However, the average carburetor man has neither the experience nor the equipment to make these changes and this work should be done in conjunction with someone who has a larger background of experience and knowledge.

Ignition Important Too

Perhaps the next most neglected item on an engine is the ignition system. This system has as much to do with good gasoline averages as has carburetor condition. Most distributors have the breaker points checked during routine inspection periods but very few are removed and the automatic advance and vacuum advance checked at periods

A NEW WET TYPE VALVE REFACER AT A NEW LOW PRICE
This low-priced Refacer with its BUILT-IN WET GRINDING, Micrometer Feed, High Speed Collet Adjustment and every other feature you need for servicing FORD and other valves to 5" head diameter, gives you factory precision and finish at low cost.
Attachments and equipment furnished with Refacer or available at nominal extra cost, include Ford Depth Gauge, Ford Valve Stem Grinding Fixture, V-Block, Standard and 90° Diamond Dressers, Rocker Arm Fixture, Standard, Large and Special Short Collets, Standard, Coarse and Fine Grinding Wheels, etc.
$175
At Your Jobbers or write factory for complete information.
THE HALL MANUFACTURING CO. · 1610 WOODLAND AVE., TOLEDO, OHIO
HALL MODEL 80 WET TYPE VALVE REFACER
HALL COMPLETE VALVE SHOP
A business-getter. The last word in valve servicing equipment. Combines WET Refacing and ECCENTRIC Seat Grinding in a strong, attractive, easily portable Cabinet. Cabinet, Seat Grinder and Refacer may be bought separately or in any combination desired. Get full details from your Jobber or write the factory today.

HANDSOME TRUCKS BUILD BUSINESS!

HONESTLY, MARY, DO YOU THINK IT'S WISE TO BUY MEAT FROM THAT BUTCHER? LOOK AT HIS TRUCK—IT'S A FRIGHT! SUPPOSE HE'S AS CARELESS ABOUT HIS STORE!
ANOTHER CUSTOMER LOST, MR. SCHMALTZ— JUST BECAUSE OUR TRUCK LOOKS SO SHABBY. "HOW DO I KNOW," SAYS SHE, "THAT YOUR STORE ISN'T JUST AS DIRTY?"
YES, YOU'D BE SURPRISED HOW LITTLE IT WILL COST YOU TO FINISH YOUR TRUCKS WITH DULUX! AND YOU'LL BE DELIGHTED AT HOW LONG DULUX KEEPS ON LOOKING FINE. YOU'LL SAVE A LOT ON REPAINTINGS.
SAY, MR. SCHMALTZ, WE GOT MRS. HIGGINS BACK AGAIN. TAKES ONE LOOK AT THAT SHINY NEW FINISH AND GIVES ME AN ORDER ON THE SPOT. "I KNOW YOUR STORE MUST BE CLEAN," SHE SAYS, "JUDGING BY YOUR TRUCK!"

YOUR CUSTOMERS can't help forming an opinion of your business by the way your trucks look.

We don't claim a DULUX finish will start customers knocking at your doors, but it *will* give them a good impression of your business methods.

Thousands of truck operators believe that firmly. That's why they specify gleaming DULUX for their trucks . . . plus the fact that DULUX costs far less in the long run because it lasts longer, stands up better, and saves a lot because it needs *fewer repaintings*.

How about you? A Du Pont representative will be glad to call and give you full information about this finer-looking, longer-lasting finish. Just write to E. I. du Pont de Nemours & Co., Inc., Finishes Division, Refinish Sales, Wilmington, Delaware.

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of say 10,000 to 20,000 miles. The vacuum and automatic advance mechanism of a distributor can change considerably and these advance curves should be checked to give best operation and fuel economy. For this reason a distributor test stand is most desirable, since the cam angle or distributor point opening can be accurately checked, as well as the automatic advance. With a vacuum pump installed, the vacuum control can also be checked, thus giving a complete story on the performance of the distributor unit.

Spark plugs should be inspected and reset frequently. Maximum mileage without inspection should not exceed 5000 miles. The cleaning by sand blasting of spark plugs is perhaps desirable but coarse abrasives should be avoided. Spark plugs should be carefully cleaned with compressed air after sand blasting so as to remove any of the remaining cleaning medium. The life of the spark plug can be increased and greater engine efficiency insured by having one man who is responsible for spark plug inspection and replacement. There are a number of fleets throughout the country who have their men remove spark plugs and turn them into the electrical department. Either new or cleaned and adjusted spark plugs are drawn out and installed in the engine. At frequent intervals during the week the used plugs are cleaned, regapped, and tested. Those plugs that are too badly worn are thrown out and new plugs are drawn out of stock to replace them. This procedure, in almost every instance, has resulted in increased spark plug life and less road failures attributable to spark plugs.

Recent investigations have shown that wider spark plug gaps are desirable in certain cars using rather lean part throttle carburetor settings. This is also true in city operation when a great deal of idling or slow engine work is necessary. These wider gaps put a greater demand on the ignition system and require more care of the system. Generally, it can be said that wider gaps should contribute slightly to increased gasoline economy.

Not enough attention has been paid to the very important item of setting the ignition timing correctly. On this matter the manufacturer is equally to blame with the operator by not providing easily accessible timing marks. The use of a spark gap or a Neon flasher light is recommended and timing should be set with the engine in motion so as to offset any looseness in the drive system between the crankshaft and the distributor. Generally, it is advisable to paint the timing marks with white paint so they will be easily visible. If and when the manufacturer does not provide proper timing facilities, the operator will be repaid many times for the time and expense involved to provide some easily accessible means of timing. Inspection crews and mechanics are much more likely to check timing if accessible means are available.

A very much neglected item on the average engine is the fuel pump. Its ability to work reasonably well day after day has probably been a direct factor in contributing to this neglect. Fuel Pump condition and vapor lock complaints travel almost hand in hand. Experience has shown that fuel

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TO
Rear Door
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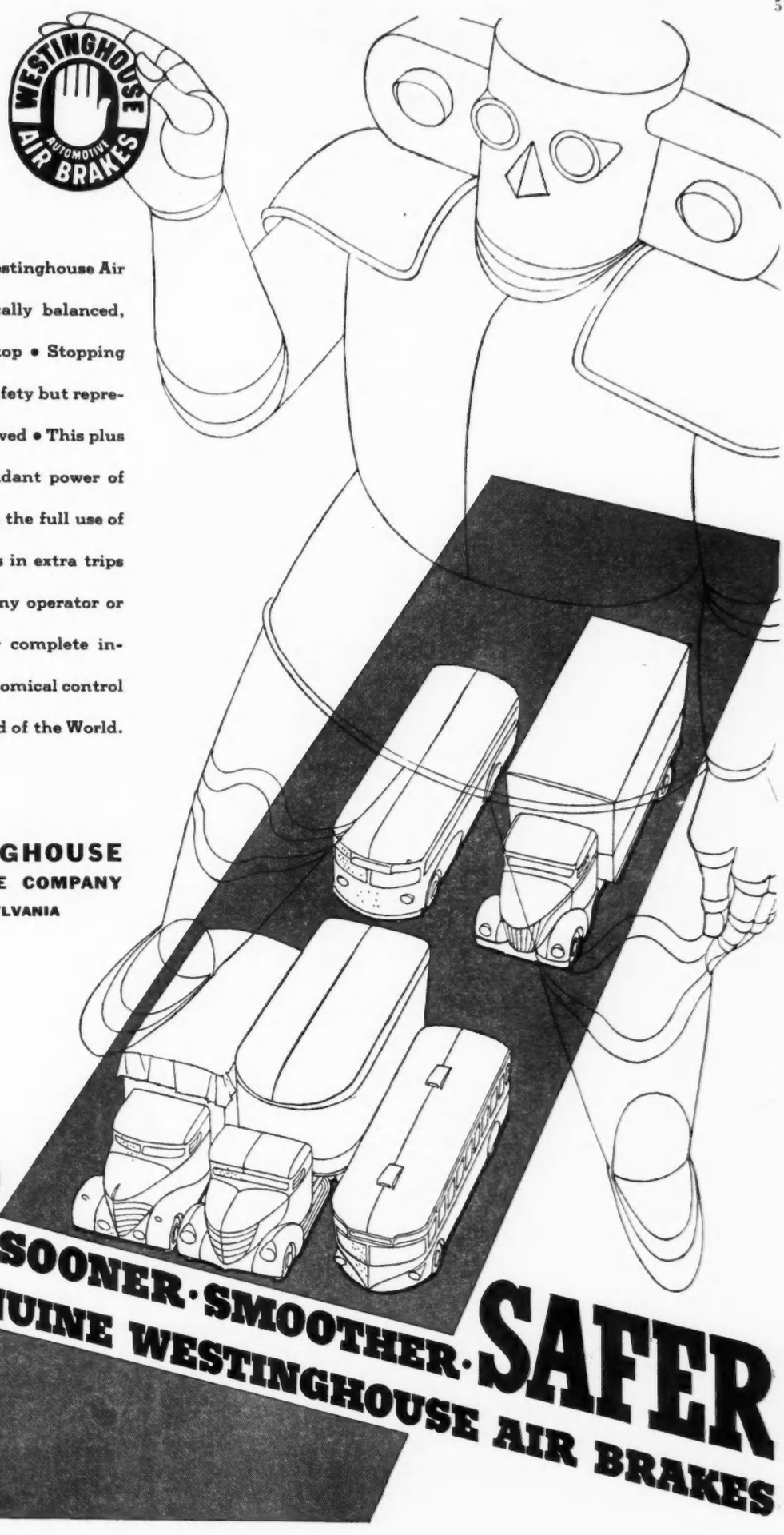

Traditionally safer genuine Westinghouse Air Control gives you a scientifically balanced, smoother, instant power-to-stop • Stopping sooner not only adds to your safety but represents a real economy in time saved • This plus the tested fact that the abundant power of Westinghouse Control permits the full use of schedule potentialities, results in extra trips . . . a saving of dollars • Ask any operator or address the manufacturer for complete information on this modern economical control and recognized Safety Standard of the World.

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WITH GENUINE WESTINGHOUSE AIR BRAKES

Looks LOW—"Costs Low"—*but a* HONEY *for Hauling**

Look at the SIZE of this bakery trailer. Don't be fooled by the way it hugs the ground; it's big. You'd hesitate to think of a job like this to add to your fleet *until you remembered Plymetl construction*—because with dead weight eliminated, a trailer or truck of any size is an extra strong but lightweight unit and a pretty smooth job to advertise your company on the roads and streets. They are making Plymetl into all the curved new streamlined forms—still with a minimum of interior bracing. Your body builder can show you a neat body and a neat saving if you will ask him about Plymetl construction. Write us for the weight-saving story.

HASKELITE
PLYMETL
For Material Savings In Body Construction

HASKELITE MANUFACTURING CORPORATION
208 West Washington St., Chicago, Illinois
Offices in Detroit, New York, Los Angeles
* The semi-trailer body above was built by Highway Trailer of Edgerton, Wis.

pumps which are up to maximum operating efficiency will eliminate the majority of vapor lock complaints. Fuel pumps are not difficult to test while installed on the engine. The use of a pressure gage and a pint measure to check capacity against time is all that is necessary. Many operators have provided a convenient tee or pet cock in the line so that the fuel pump test equipment can be quickly installed during the routine inspection periods.

In conclusion, it is well to again stress the need for understanding the equipment which is being used and a devotion of time to details which seem rather small. However, it has been illustrated that attention to these very details can increase the fleet average from 3 per cent to 5 per cent without any recalibration of carburetors or changing of equipment from its original standards.

Modern Oakite Methods

Modern methods of cleaning in connection with fleet maintenance and truck motor repair operations are described and illustrated in a 36-page booklet recently issued by Oakite Products, Inc., New York, N. Y.

FRAMES

(CONTINUED FROM PAGE 28)

supposed to be tougher but the frames of the trucks we use outlast the trucks and we have many problems other than frames."

Another negative vote said, "We have experienced only two truck frame failures, both of which were loaded too heavily and broke in two."

One simply stated that he did not consider the heat-treated frame to be the best. Another said that on straight trucks or six-wheelers a heat-treated frame was probably best because of its lightness but on tractor semi-trailer operation a "pressed steel frame with fifth wheel properly located will stay put." Five indicated that they did not have any frame trouble anyhow so why bother, while two operators who have both types of frames in their fleets said that they did not have any trouble with either one. Two indicated that their lack of interest was due to light loads and smooth roads which was one way of saying that their fleets were no proving grounds for any type of frame. Quite naturally none of these operators possessed any experience which would indicate that a heat-treated frame lengthens the useful life of a truck.

Among the boys who did not say whether heat-treated frames would influence their selection of trucks are two who do no buying. In one of these fleets the vehicles are supplied through competitive bidding and in the other the local operator does not have anything to do with the purchase of new equipment. One more operator provides evidence that salesmen have been derelict in their duty since the subject has never been brought up in solicitation.

One operator wanted to know more about the differences, since he has had plenty of broken frames in the last six years and five operators confessed to being without experience with heat-treated frames and therefore not prepared to make any statements. This means that seven out of 11 operators are waiting to be convinced and two do no buying, leaving only two who are indifferent.

40,000 to 65,000 miles per truck out of every set of Edisons

The enthusiasm users have for Edison Spark Plugs is not based on the "prima donna" performance of an occasional set . . . but on the year after year performance of set after set.

That's why Edison receives so many letters like the one repeated here . . .

"Thought you would like to know regarding the service we are receiving from Edison plugs. We have been using Edisons in our fleet of one hundred twenty-five (125) trucks for the past four years, and have secured better results from them than any plug we have ever used. We have been receiving anywhere from forty to sixty-five thousand miles service on most of the sets. Our fleet consists of Whites and Macks."

Edison Spark Plugs set up records like these because they have kept pace with modern automotive engineering. The Albanite Core . . . the Built-In, Leak-Proof Gasket and Edispark are exclusive Edison features that have been developed to match changing automotive requirements and specifications. They not only extract the greatest amount of power from modern gasoline, but outlast the best of competitive plugs.

If you want your own facts about Edison Spark Plug performance . . . pick any truck in your fleet and install a set of Edisons. Compare the cost plug per plug, and add up the operating savings per mile.

EDISON-SPLITDORF CORPORATION
West Orange New Jersey

ONE OF THE
Thomas A. Edison
INDUSTRIES

"Pro" on General Principles

Ten of the 31 operators who are influenced in new truck purchase by heat-treated frames did not actually have experience which indicated a superiority of the heat-treated frame but they believe in it just the same. The statements of some of the 10 operators were:

"Have not had experience with heat-treated frames but have some experiences with non-heat-treated frames that might have been avoided if the frames had been treated."

"My experience indicates that any metal or alloy which has been properly heat treated is superior to that which has not been heat treated. It should also hold good with truck frames which are subjected to severe operating conditions."

"I have not had any experience with heat-treated frames but I can see the need for it."

"Pro" With Evidence

Among the statements of the 21 operators who had experience to prove the superiority of heat-treated frames were some pretty strong testimonials. One said:

"We have used trucks with heat-treated frames since 1914 and to date we have not had a broken frame through service or accident. We are now operating trucks bought in June, 1922, and these trucks have more than 100,000 miles of city operation with its starting and braking shocks to the frame. We have used a few trucks without heat-treated frames and have had a few broken frames, but not very many. We have only the manufacturers' words about their frames but we are shy when we see a heavy, strong frame on a small truck. We think a heat-treated frame is a quality product and it is lighter than a poor frame and we buy trucks to haul material that is payload."

Another said: "In our experience, heat-treated frames last longer and wear longer than any other frames we have ever tried. Heat-treated frames never gave any of our trucks any trouble."

Came also a comparison: "We still have some 1917 trucks with 7-in. heat-treated frames which have never had a broken frame. They have sprung down from time to time but we would straighten them up and they would last 2 or 3 years where on some of the newer trucks carrying less weight, 9-in. to 12-in. frames have broken in two and had to be fish-plated."

From a specialized fleet: "We have never specified heat-treated frames, but about 90 per cent of our fleet is so equipped. The 10 per cent that are not have given us trouble, particularly in plowing snow when the plow strikes an unseen obstruction."

Another specialist contributed this: "We do not insist on heat-treated frames in our trucks as the matter of flexing is not a serious one. However, in the case of our semi-trailers, we insist upon heat-treated frames, thus definitely reducing flexing to a minimum which is necessary in our opinion in connection with light-gage, high-tensile steel tanks."

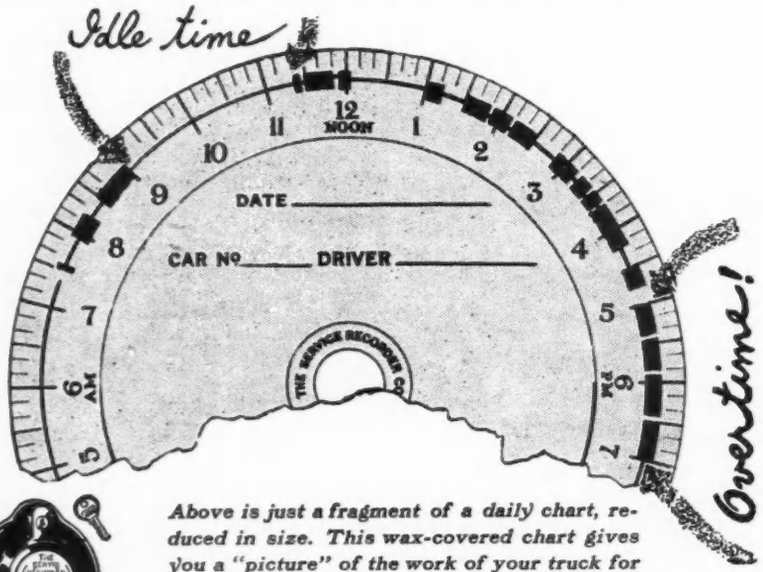
From a dump truck fleet: "On our trucks used in hauling stone from a quarry over makeshift roads, heat-treated frames do not break while those not heat treated break

OVERTIME!

Is it a habit with your truck?

One thing is certain —if your truck wastes an hour *during* the day, it will have to take an hour *after* closing time to get a day's work done. And that is what is happening with thousands of motor trucks.

If your truck is busy during the day and still has to work overtime, then pay your overtime cheerfully, and *on the basis of the chart of the Servis Recorder.* Don't have any more arguments about overtime. And don't have your trucks working after hours when they could finish everything *during* hours. The Servis Recorder will tell you on its chart the whole situation at a glance.



THE SERVIS RECORDER

Above is just a fragment of a daily chart, reduced in size. This wax-covered chart gives you a "picture" of the work of your truck for the past 24 hours, with busy time recorded automatically on it. The chart is inside the little Servis Recorder, *and the* Servis Recorder, *by the way, is attached to any truck merely by a couple of ordinary screws or bolts. Over 100,000 trucks have been equipped already*

Write for booklet "Ten Ways of Getting More Work Out of Motor Trucks"

THE SERVICE RECORDER COMPANY
1422 Euclid Ave., Cleveland, O.

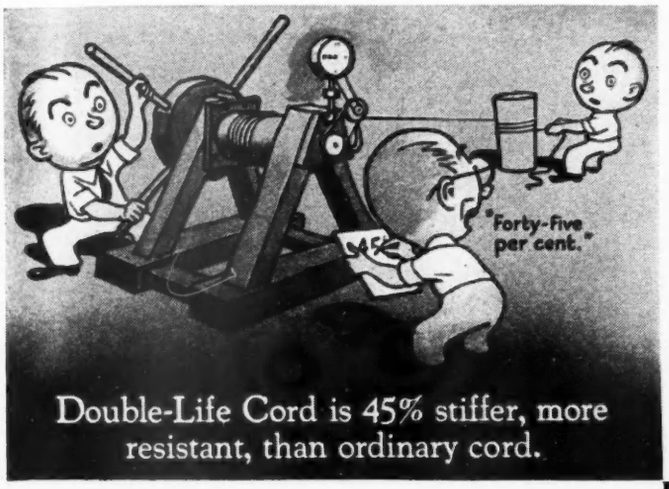
YOUR TRUCK TIRES

You want truck tires which give longer mileage, more reliability, and greater economy . . . Many big fleet owners equip with LEEs.

Lee Double-Life Cord makes Lee De Luxe Tires masters of wear and hard work. Only Lee Tires have "Double-Life Cord".

LEE's superiority is based on:

1. **Greater flexibility, greater tensile strength and resistance to tire "growth" because of LEE Double-Life Cord.**
2. **Flexing heat, so generally destructive in tires, is greatly reduced in Lee Tires because of the Lee Double-Life Cord used in their construction. Lee Tires run cooler . . . give longer wear.**
3. **Tougher, longer wearing, special road-grip LEE treads made from Lee pure rubber compounds.**
4. **Master tires, the result of specialized engineering and experienced craftsmen.**



Double-Life Cord is 45% stiffer, more resistant, than ordinary cord.

Read all the facts behind these statements . . . facts worth thousands of dollars a year to you in tire purchases.

Write today for *your* free copy of our new booklet: "Facts About LEE Double-Life Cord".

We service National Accounts promptly everywhere. Eighteen thousand dealers.

Also, the constant strain on the cord of ordinary tires causes them to enlarge or "grow."

As a tire grows, some cords lose more of their stretch than others, setting up additional unequal strains and friction.

LEE of Conshohocken Tires

GENERAL OFFICE:
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FACTORIES: Conshohocken, Pa.
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in this rough treatment."

An oil hauler stated: "I have found that on the old style frames it was necessary to reinforce them in order to prevent them from breaking at the back of the cab. With the heat-treated frame I have found that we do not have to do this."

A freight hauler said: "From our experience, a heat-treated frame can be compared with an ordinary frame by likening a tempered spring leaf with a bar of ordinary untreated machinery steel of same size and shape. The heat-treated frames are springy and give slightly under strain and spring back in place. The ordinary frame for the same strength must be made of much heavier material and when such a frame becomes sprung or bent it stays that way."

Another hauler went a little deeper: "While I have stated a preference for heat-treated frames that does not tell the whole story. I would rather say that I prefer an alloy steel frame to an open-hearth steel frame. Even then, unless there is sufficient depth and thickness of channels and an adequate number of cross members properly spaced, braced and gussetted, an alloy or any other type of frame would be unsatisfactory. It is my opinion that the frame of a truck has greater bearing on the life of a truck than any other single unit."

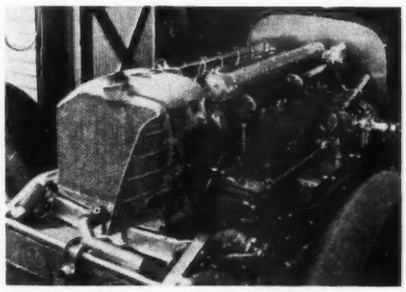
BLOWERS

(CONTINUED FROM PAGE 35)

race when the hose connection between the supercharger and the intake manifold split. Of course, if the jobs hadn't had superchargers the hose connections wouldn't have been necessary and the trouble wouldn't have occurred. On the other hand, the superchargers were in perfect condition; so whether these could be classed as supercharger failures is a debatable question.

The blower on the Alfa Romeo driven by Rex Mays, and the blower on the Maserati driven by Mauri Rose, seized. These two cases were definitely supercharger failures—probably fitted up too tight.

Shorty Cantlon had to quit when his supercharger shook itself loose—another definite supercharger failure. Lou Meyer drove a supercharged job and had to quit because of oil pump trouble—no supercharger failure in that case. George Bailey, driving another blown job, was forced out with clutch trouble—another clean bill of health for the supercharger. Ted Horn drove the only supercharged job that finished, and he took fourth place.



The 6-cyl. Sparks-Thorne models driven by Snyder and Householder mounted blowers on the side, were forced out by hose trouble

Lifting the ban on the quality and quantity of fuel that could be used gave the boys free rein to select the fuel that performed best in their particular engines. Gulf had some prize money up for the boys to shoot at and a good many of them used Gulf gas. It was heavily leaded, the boys doing their own mixing, so it is impossible to state definitely just what grade it finally turned out to be. It is a safe bet, however, that it was better than 80 octane. Some used an alcohol blend, with benzol or aviation gas as a base, and shoved the octane rating up to 100 and over. It is interesting to note that these alcohol blends gave about 3 or 4 miles to the gallon, while the leaded fuels averaged around 9 miles to the gallon. Compression ratios were in the neighborhood of 12 to 1.

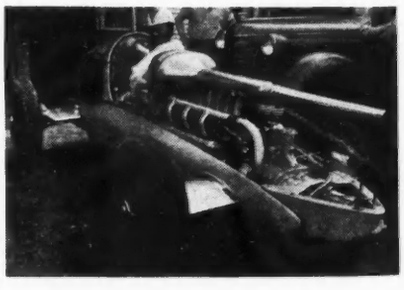
Brakes were larger this year, and were air cooled by large scoops installed on the front of the brake backing plate, with ventilating openings on the rear. Circumferential fins were cast on the drums, to aid cooling. Twenty cars were equipped with hydraulic brakes, twelve had mechanical, and one car had mechanical front brakes and hydraulic rear.

Oil coolers were in more general use than ever before, and were particularly noticeable on the Sparks-Thorne jobs.

Needle bearing steering connections appeared on the Sparks-Thorne jobs, replacing the conventional ball-and-socket type. The drag link was fitted with a double yoke at the Pitman arm end, the yokes being 90 degrees from each other. One yoke straddled the Pitman arm, in which was a needle bearing, the retaining bolt acting as the inner race of the bearing. The other yoke attached to the drag link which also had needle bearings. The connection at the forward end of the drag link was also through a needle bearing, and needle bearings were inserted in the steering arms for the tie rod ends. With this practically frictionless steering, caster and camber settings were particularly delicate as these jobs were very sensitive.

One car, the Marchese Special, Car No. 45, had a tubular-steel frame, with welded tubular-steel cross members—a beautiful piece of work. Water-cooling radiators were mounted on the sides of the frame where the running boards of the conventional passenger car are located. Four cellular type radiators were used, two on each side, and were enclosed in a metal housing open at each end and protected by chrome-plated grilles. This mounting permitted radical streamlining of the front of the car. Powered by an 8-cylinder Miller engine of 182 cu. in. displacement, and without a blower, this car qualified at 119.5 m.p.h., and came in 7th in the race. It weighed 1806 lb.

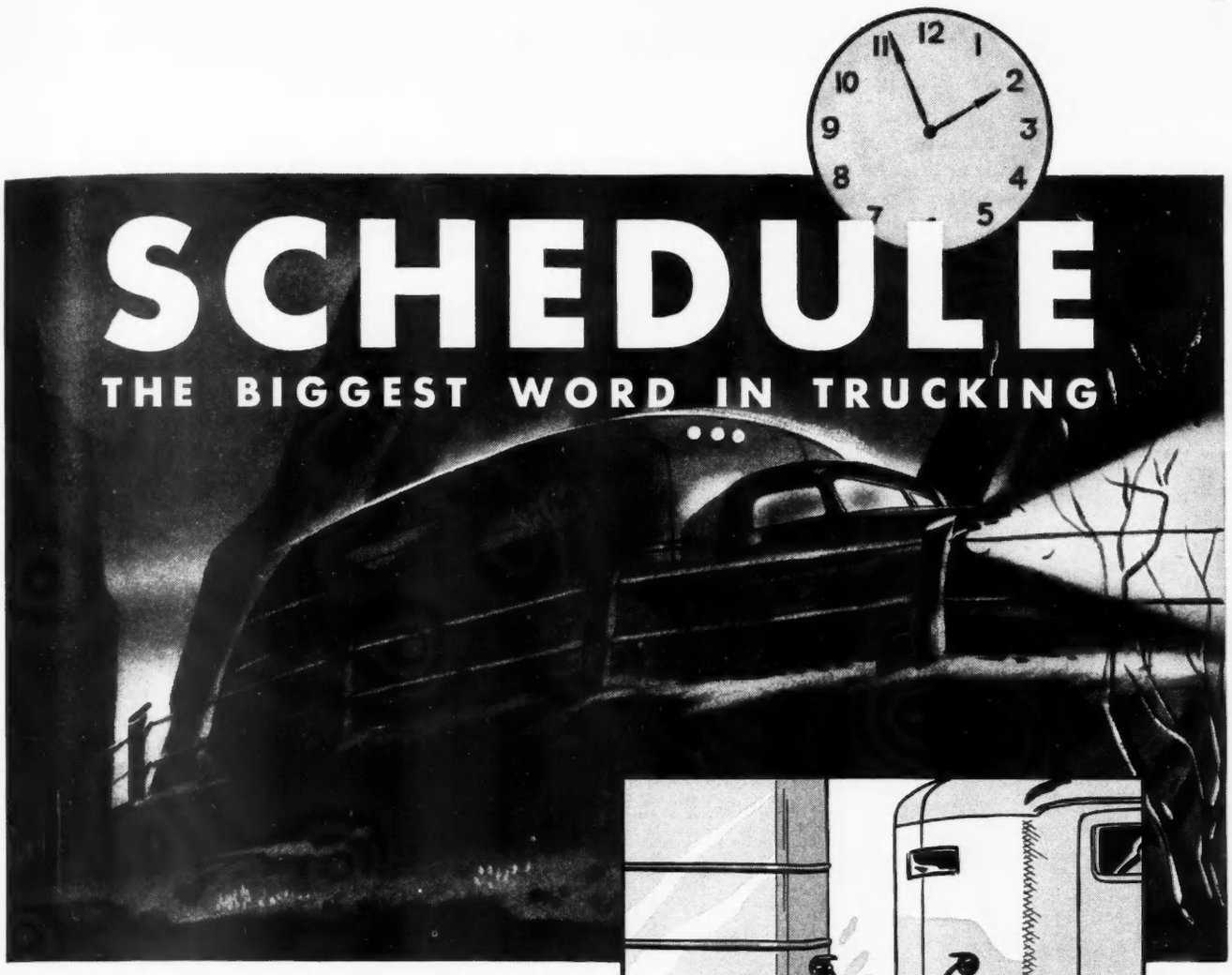
The outstanding car seen at the track was the rear-engined Miller,



Harry Miller's interesting 6-cyl. rear-engined car was finished too late to qualify

designed by Harry Miller. Although it was not ready in time to qualify, nevertheless it was so radically different from any other car entered that it justifies a brief description.

It was powered by a new 6-cylinder engine turned end-for-end and mounted in the rear on its side—



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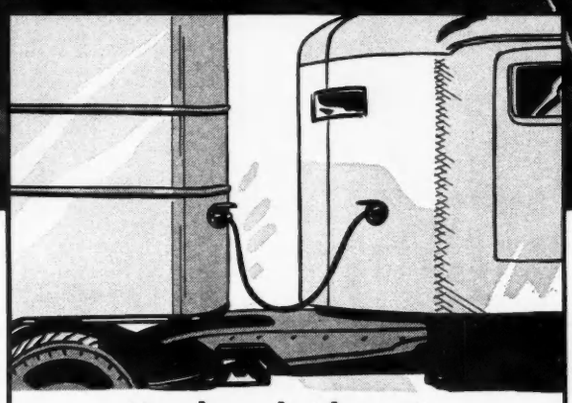
Night and day, rain or shine, the trucks of trade keep moving over the nation's highways . . . maintaining a reputation for dependability and safety which has lifted them to the top ranks of America's transportation system. Part of the credit for this goes to the skilled, careful, courteous drivers at the wheels; but an even larger part belongs to the men responsible for the upkeep, efficiency and economy of the line—the Maintenance Men. It is their selection of equipment that determines whether schedules will be made or not—and they choose the best. That is why Packard 440 Spark Plug Wires — Packard Battery Cable — Packard Primary, Lighting and Accessory Cables are standard for replacement. Packard Electric Division, General Motors Corporation, Warren, Ohio.



Packard Electric Trailer Connector System

Designed and engineered in accordance with suggestions by fleet operators, insurance companies, and electric brake manufacturers—conforming to the lighting requirements of the Interstate Commerce Commission—Packard's reliable and economical electrical coupling is an important safety item for all tractor-trailer combinations. Flexible installation, interchangeable and replaceable; a unit that answers all requirements for any application. Write for special bulletin F-23A.

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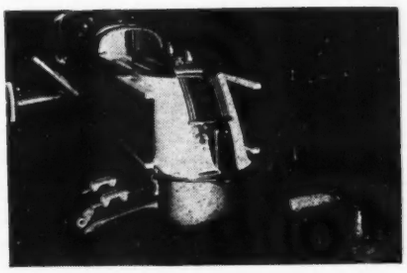
about 45 degrees from vertical. It had a bore of 3.5 in. and a stroke of 3.125 in., and a displacement of 180.5 cu. in., was equipped with a Roots type blower and a single carburetor of Miller design. The exhaust pipe was mounted on top of the engine, extending through a slot in the rear of the body. Openings on each side of the driver's seat admitted air to the exhaust pipe, thereby forming a draft into which the exhaust gas was discharged, eliminating any possibility of back-pressure building up in the exhaust pipe. Part of the air entering through the openings on each side of the driver's seat was directed to the engine compartment, and the engine block and crankcase was heavily finned to aid cooling.

Independent wheel suspension front and rear, and four-wheel drive, were other features which made this car outstanding. Springs of transverse mounting were used, two in front and two in rear, mounted side-by-side. Upper and lower control arms were made of aluminum castings, designed to also serve as streamlined covers for the springs.

One driveshaft extended from the flywheel (at the driver's seat) forward to the transmission which was located in the front of the car over the front axle. This drive shaft furnished the power for the front differential, and drove the front wheels. The transmission was equipped with a second constant-mesh countergear which furnished the power for another driveshaft extending back to the rear differential, driving the rear wheels.

The transmission was equipped with four forward speeds and a reverse, and was unusual in that the gears did not run in oil. The lubricant was pumped to the bearings, the throw-off supplying lubrication to the gear teeth, and when the lubricant dropped down to the bottom of the case, a scavenger pump returned it to the reservoir. Provision was made for replacing the transmission gears with other sets of different ratios so that the car could be used for different types of racing. This feature eliminates the necessity of changing differential gears, an operation which would require about two days' time on this four-wheel drive job.



Two 4-cyl. Millers featured four-wheel independent springing, oil coolers and radiators on the side. But neither qualified

Brakes were hydraulic, disk type, constructed very much like the conventional single-plate clutch. Oil pressure acted upon a diaphragm which forced the lined plate against the vertical side of the brake drum. Each wheel had 90 sq. in. of braking area, which is equal to a 16 in. drum with 2 in. wide lining.

In place of the conventional starter, this car was equipped with a cartridge type starter. A shell similar to a shot-gun shell, was discharged in a tube leading to the starting motor. The concussion of

I REMOVE RUST and RUST-PROOF ALL METAL WITHOUT DRAINING the COOLING SYSTEM
Here's a brand-new chemical specialty that will definitely reduce your maintenance expense and step up the operating efficiency of your fleet.
All you do is use a pint of Kleerust for every four gallons of water in the cooling system, and operate the truck as always without further attention. Within a week the water will have turned a milky white, and within a month will have returned to its original crystal clearness . . . with the cooling system fully protected against rust for a whole year.
Only when another cleaner is in the cooling system, or when it is unusually rusty is it necessary to drain before using Kleerust. It does not affect anti-freeze nor is it affected by it. In fact, Kleerust adds a protective seal to anti-freeze that helps retard evaporation.
If your jobber can't supply your needs . . . order direct.
SURE-RITE
REMOVES RUST PROTECTS METAL
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SURE-RITE PRODUCTS CORP. PHILADELPHIA, PENNA.
M-E-M-A
NET PRICE TO FLEET OWNER 60c PINT In Dozen Lots
KLEERUST
IT ONLY TAKES Me 30 MINUTES TO PERMANENTLY REPAIR COOLING SYSTEM CRACKS
Don't let your trucks be laid up for long periods because of cracked valve ports, cylinder heads or water jackets. Sure-Weld permanently repairs them all . . . cast iron or aluminum . . . within 30 minutes' time. It's new! It's tried! It's guaranteed on a "money-back" basis.
Sure-Weld will not clog radiators and has a cleansing effect on the entire cooling system. Start saving now. Order from your jobber or write direct.
SURE-WELD
$1.40 Per Pint to Fleet Owners
I MAKE NEW HEADLIGHTS OUT OF OLD ONES
There isn't a headlight on any one of your trucks that is any better than its reflector . . . and Sure-Plate . . . at the lowest possible cost, puts headlight reflectors right back to "factory-finish" brilliancy.
The cost of Sure-Plate is so low that the cost of reflector re-conditioning will not run more than 25c per job. And good reflectors are the finest possible safety insurance on night runs. Get hold of your jobber now. Or if he can't supply you . . . ask us where to get it.
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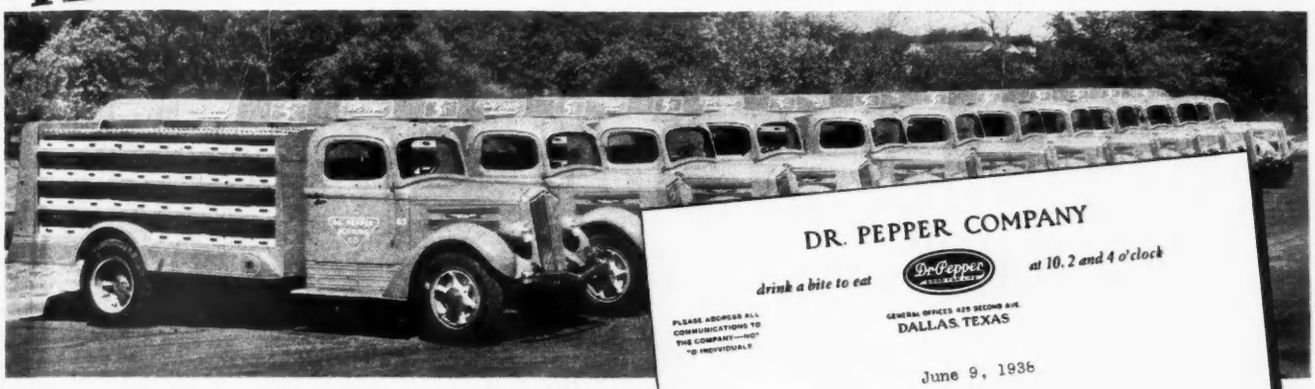
SURE-RITE PRODUCTS CORP., 6010 N. CAMAC ST., PHILA., PA.

Dr. Pepper
GOOD FOR LIFE!

TELLS YOU ABOUT PISTON RING "LIFE"!



DR. PEPPER COMPANY

drink a bite to eat — Dr. Pepper — at 10, 2 and 4 o'clock

PLEASE ADDRESS ALL COMMUNICATIONS TO THE COMPANY—NOT TO INDIVIDUALS

GENERAL OFFICES 623 SECOND AVE
DALLAS, TEXAS

June 9, 1936

Wilkening Manufacturing Co.
2000 So. 71st Street
Philadelphia, Pa.

Gentlemen:

We are operating 50 pieces of equipment out of the Dallas plant, including:

21 Whites
1 Indiana
12 Internationals
16 Fords, Chevrolets, Plymouths.

We have been using Pedrick Hydraulic rings exclusively and the results for ring life and general all-around performance exceed by far any other brands we have previously used.

Incidentally, we have used practically all makes of Piston rings and take pleasure in stating that we are entirely satisfied and 100% sold on Pedrick Hydraulic Piston Rings.

Yours very truly,

DR. PEPPER COMPANY

Per A. L. Brentlinger
Supt. of Service

B:JR

. . . and why Pedrick Hydraulics are used exclusively in Dr. Pepper's fleet!

From his wide experience Mr. Brentlinger knows how really superior Pedrick Hydraulics are—not just in oil control or power, but in *all* of the things that a fleet operator must get from a piston ring. The amazing *long-life all-around top performance* of Pedrick Hydraulics is why they are the rings approved and used in their own official service work by such outstanding vehicle and engine builders as White, Diamond T, Autocar, Indiana, Stewart, Lycoming and others.

To keep *your* trucks running more profitably more of the time, use Pedrick Hydraulics. The Pedrick Fleet Engineer is ready to help you. Write for a test installation today.

Wilkening Manufacturing Co.
Philadelphia
In CANADA: Wilkening Manufacturing Co. (Canada) Ltd., Toronto

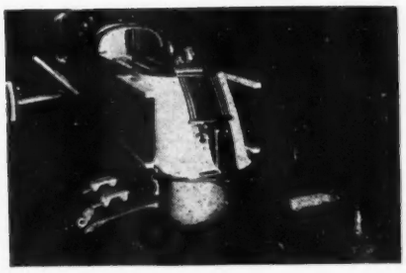
Pedrick HYDRAULIC PISTON RINGS

about 45 degrees from vertical. It had a bore of 3.5 in. and a stroke of 3.125 in., and a displacement of 180.5 cu. in., was equipped with a Roots type blower and a single carburetor of Miller design. The exhaust pipe was mounted on top of the engine, extending through a slot in the rear of the body. Openings on each side of the driver's seat admitted air to the exhaust pipe, thereby forming a draft into which the exhaust gas was discharged, eliminating any possibility of back-pressure building up in the exhaust pipe. Part of the air entering through the openings on each side of the driver's seat was directed to the engine compartment, and the engine block and crankcase was heavily finned to aid cooling.

Independent wheel suspension front and rear, and four-wheel drive, were other features which made this car outstanding. Springs of transverse mounting were used, two in front and two in rear, mounted side-by-side. Upper and lower control arms were made of aluminum castings, designed to also serve as streamlined covers for the springs.

One driveshaft extended from the flywheel (at the driver's seat) forward to the transmission which was located in the front of the car over the front axle. This drive shaft furnished the power for the front differential, and drove the front wheels. The transmission was equipped with a second constant-mesh countergear which furnished the power for another driveshaft extending back to the rear differential, driving the rear wheels.

The transmission was equipped with four forward speeds and a reverse, and was unusual in that the gears did not run in oil. The lubricant was pumped to the bearings, the throw-off supplying lubrication to the gear teeth, and when the lubricant dropped down to the bottom of the case, a scavenger pump returned it to the reservoir. Provision was made for replacing the transmission gears with other sets of different ratios so that the car could be used for different types of racing. This feature eliminates the necessity of changing differential gears, an operation which would require about two days' time on this four-wheel drive job.



Two 4-cyl. Millers featured four-wheel independent springing, oil coolers and radiators on the side. But neither qualified

Brakes were hydraulic, disk type, constructed very much like the conventional single-plate clutch. Oil pressure acted upon a diaphragm which forced the lined plate against the vertical side of the brake drum. Each wheel had 90 sq. in. of braking area, which is equal to a 16 in. drum with 2 in. wide lining.

In place of the conventional starter, this car was equipped with a cartridge type starter. A shell similar to a shot-gun shell, was discharged in a tube leading to the starting motor. The concussion of

I REMOVE RUST and RUST-PROOF ALL METAL WITHOUT DRAINING the COOLING SYSTEM
SURE-RITE
REMOVES RUST PROTECTS METAL
KLEERUST
SURE-RITE PRODUCTS CORP PHILADELPHIA, PENNA.
MEMA
NET PRICE TO FLEET OWNER 60c PINT In Dozen Lots
Here's a brand-new chemical specialty that will definitely reduce your maintenance expense and step up the operating efficiency of your fleet.
All you do is use a pint of Kleerust for every four gallons of water in the cooling system, and operate the truck as always without further attention. Within a week the water will have turned a milky white, and within a month will have returned to its original crystal clearness . . . with the cooling system fully protected against rust for a whole year.
Only when another cleaner is in the cooling system, or when it is unusually rusty is it necessary to drain before using Kleerust. It does not affect anti-freeze nor is it affected by it. In fact, Kleerust adds a protective seal to anti-freeze that helps retard evaporation.
If your jobber can't supply your needs . . . order direct.
KLEERUST
IT ONLY TAKES Me 30 MINUTES TO PERMANENTLY REPAIR COOLING SYSTEM CRACKS
SURE-WELD
$1.40 Per Pint to Fleet Owners
Don't let your trucks be laid up for long periods because of cracked valve ports, cylinder heads or water jackets. Sure-Weld permanently repairs them all . . . cast iron or aluminum . . . within 30 minutes' time. It's new! It's tried! It's guaranteed on a "money-back" basis.
Sure-Weld will not clog radiators and has a cleansing effect on the entire cooling system. Start saving now. Order from your jobber or write direct.
SURE-WELD
I MAKE NEW HEADLIGHTS OUT OF OLD ONES
SURE-PLATE
"B" ASSORTMENT $12.50 Net to Fleet Owners
There isn't a headlight on any one of your trucks that is any better than its reflector . . . and Sure-Plate . . . at the lowest possible cost, puts headlight reflectors right back to "factory-finish" brilliancy.
The cost of Sure-Plate is so low that the cost of reflector re-conditioning will not run more than 25c per job. And good reflectors are the finest possible safety insurance on night runs. Get hold of your jobber now. Or if he can't supply you . . . ask us where to get it.
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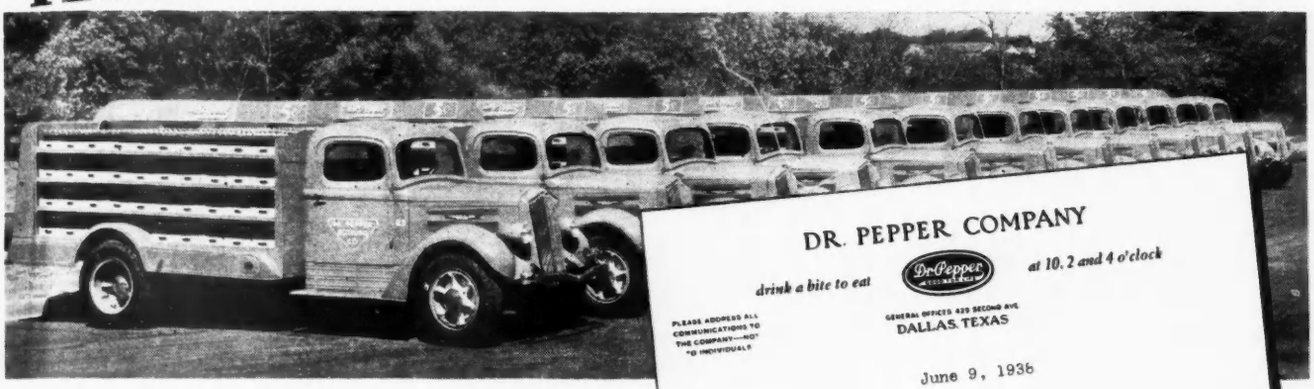

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Pedrick HYDRAULIC PISTON RINGS

this discharge acted upon a piston in the starter, throwing the starter gear in mesh with the starting jaw on the front end of the crankshaft.

Water-cooling radiators were mounted in what would correspond to the hood side panels of a front-engined car. The front was covered with a grille, in back of which was an oil cooler made in a half circle. Air entering the grille would strike the oil cooler, be deflected to each side and pass through the radiators.

AFTER HOURS

(CONTINUED FROM PAGE 19)

fered, but felt that to insist upon its passage—in the face of violent railroad opposition—might jeopardize the chances of getting the Commission's amendments passed at this session of Congress.

The railroad attitude was revealed shortly thereafter by an attorney representing the Association of American Railroads. He objected to the construction placed upon the Motor Carrier Act by Eastman in his discussion of the Shipstead Amendment. He said that under the Motor Carrier Act railroads should be just as free as anybody else to apply for a certificate to operate motor trucks wherever they can prove that public convenience and necessity will be served. They should be free to exercise this freedom, he said, in petitioning to set up highway lines in competition with existing motor carriers, or in establishing lines where there are no motor carriers.

There is the strategy in plain terms. First to get acceptance of the freedom-of-action theory, then petition for the setting up of competing motor services, for the establishment of non-competitive motor services, and for the substitution of unprofitable rail hauls with motor carrier lines. The fight for railroad domination of the highways would be on, with the cards—political and financial—stacked in their favor.

It follows that if domination is effected, the railroads will be anxious to coordinate their rail and road services to effect every possible economy. It is then that they will be all for economic apportionment of traffic. They will favor it as a policy of management to effect economies in operation, and as a plan of regulation to weaken motor carriers who survive their marauding tactics.

This, we believe, is railroad strategy—or, as the saying is, a reasonable facsimile thereof. But it doesn't stand a Chinaman's chance in Japan at the moment or in the future if the current temper of the I.C.C. prevails. However, commissioners come and commissioners go—and with high judicial bodies seemingly varying their interpretations of law to conform with changing conditions, who is to say that a quasi-judicial body like the I.C.C. may not do likewise? Especially since it has been said by one commissioner that the Motor Carrier Act as written is so broad that it is subject to almost any interpretation.

There our remarks to the inquiring writer ended. We end them here with the observation that the circumstances dictate constant vigilance on the part of the trucking industry and a shunning of alliances with the railroads. They are not friends of highway transportation as it is constituted today.

Arrow Directional Signals

Arrow Signals have won the preference of fleet operators on sheer merit. Arrow built-in features and durability were especially designed for long, rough commercial service.

The Arrow Semi-Automatic Switch is recognized everywhere for its superiority in design, construction and trouble-free performance.

Arrow Fog Lights

A balanced combination of a scientifically designed lens and silver plated reflectors produces the penetrating, controlled, Arrow adverse weather driving beam.

Its extra heavy shell and rugged mounting bracket, are additional construction features which appeal to commercial operators.

Arrow Marker Lights

Every type of marker light with lens in red, amber, green, clear or blue, and 6-8 volt 3 c.p. bulbs, are included in the Arrow Line of Legally Approved Safety Devices.

Arrow's inherent design, material and construction features, which provide durability for heavy-duty service, are built into Arrow Safety Marker Lights.

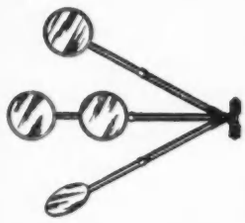
Arrow Safe-C-Mirror

Strictly a heavy-duty mirror.

Angular adjustable and telescopic from 17" to 25"

Mirror back "life-time" copper plated. Permanently brilliant and guaranteed against atmospheric conditions.

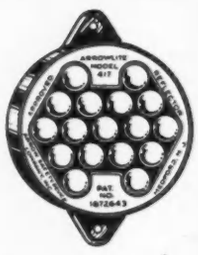
Extra heavy mounting bracket, shaft, arm and mirror head.



Arrow Reflex Reflectors

Night traffic demands efficient, heavy-duty Reflex Reflectors for pay-load safety.

Arrows have three times the brilliancy required by I. C. C. and a reflection efficiency of 1000 feet in the glare of normal headlights.



Arrow Flares

Arrow No. 80 Oil Burning Flares are sturdy, safe and legally approved. Burning time 16 hours on one filling.

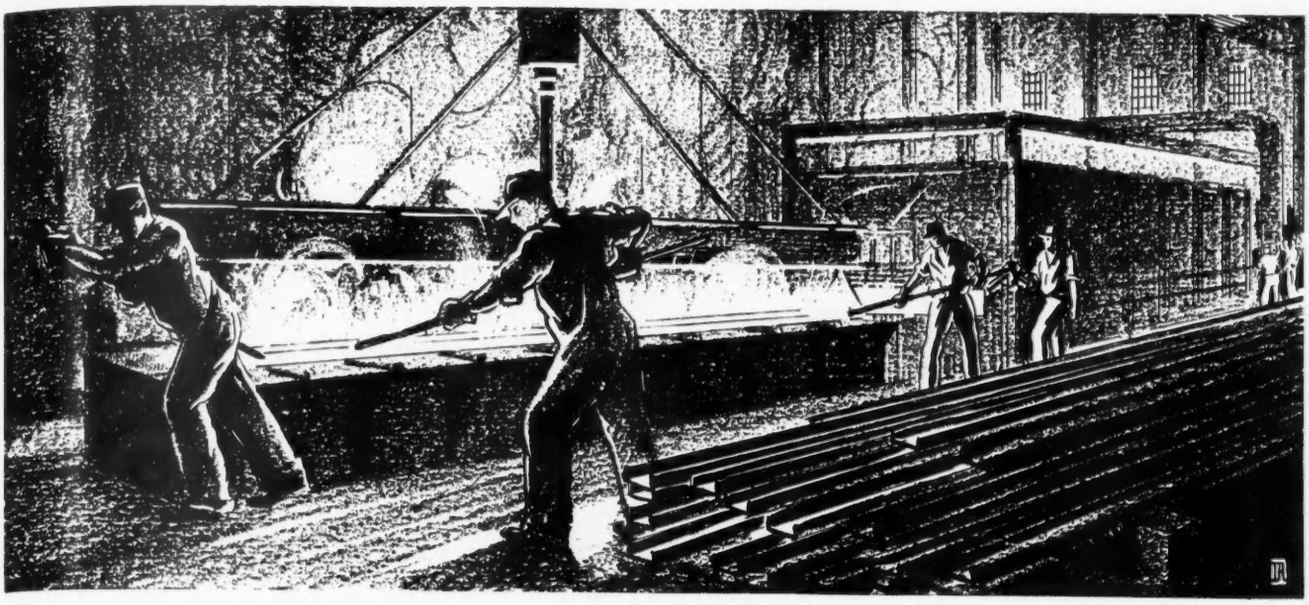
Arrow No. 90 Electric Flares operate on a standard dry cell —burn four 8-hour periods. Visibility one-half mile.

Write for The New ARROW Catalog

For Safety Sake

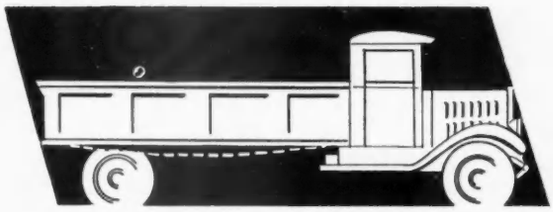
ARROW SAFETY DEVICE COMPANY, INC.

MEDFORD, NEW JERSEY

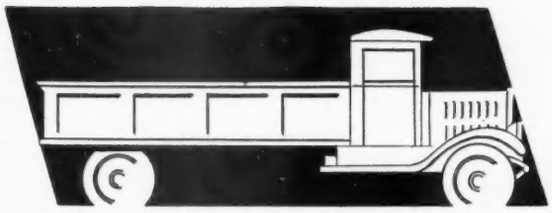


"Our Personal Preference is"

Says Superintendent of a Fleet of 735 Trucks



Under heavy over-loads, non-heat treated frames remain sprung when the load is removed.



Parish Heat Treated Frames will return to normal. Heat treatment gives them this comeback.

"We think a heat-treated frame is desirable because we use our trucks many years before replacement. We have found Carbon Steel frames, not heat-treated, to fail much faster than those that are heat-treated. Our own personal preference is for an alloy steel frame—heat-treated because of continual heavy loads carried, and for freedom from crystallization."

This superintendent is but one of many who is not only convinced that heat-treating is essential for a resilient, tough, strong frame, but who prefers the trouble-free service a heat-treated frame gives. And when others add their agreement to this statement—well, you have proof that our story is true.

Like this superintendent, you can appreciate the fact that the elastic limit of straight carbon steel which has been heat-treated is 25% higher than so-called high strength steel without heat-treatment, while the elastic limit of alloy steel when heat-treated is double that of non-heat-treated high strength steel.

In addition to raising the elastic limit and the fatigue value of the frame, heat-treating reduces weight—as much as 40% compared with low carbon, untreated steel. As compared with low carbon untreated steel heat-treated carbon steel is 100% stronger, and heat-treated alloy steel is 200% stronger.

These are factors which make heat-treated frames stand up in service, yet cost owners less in maintenance and pay-load expense; these are factors which make trucks and trailers with heat-treated frames popular among fleet owners and operators everywhere.

Write today for our brochure on truck and trailer frames.

PARISH PRESSED STEEL COMPANY
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F. Somers Peterson,
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PARISH

PRESSED STEEL HEAT-TREATED FRAMES FOR TRUCKS & TRAILERS

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PRIVATE CARRIERS

(CONTINUED FROM PAGE 34)

"This organization will be devoted to promoting the highway transportation interests of agriculture and industry that use and employ private commercial automotive vehicles upon the American highways.

"This organization should be of interest to all trade, farm, traffic, purchasing, industrial and engineering organizations and other groups and individuals interested in promoting the economic use of private commercial motor vehicles. It will cooperate with existing organizations and groups having similar objectives."

Pointing out that the combined number of privately owned and operated trucks that move the products of agriculture and industry amounts to over 3,500,000 or 85 per cent of the total number of trucks registered in the country, the PCOC explained that its action was prompted by "representatives of farm and industrial shippers who, in recent months, have expressed the growing need for an organization to present the views of private truck owners both nationally and in the states."

Beyond that the committee did not go in reporting on the meeting but it was understood that the conferees reiterated the view that cooperation with existing national organizations in going forward with their plans is contemplated, that present state facilities designated to assist private carriers definitely would be a part of the picture, and that organization of a super-group to duplicate or supercede the functions of already-established organizations had no place in the program.

It was emphasized that there is no divergence of opinion between the new group and the American Trucking Association but that where the two organizations are faced with common problems they will work together and that when conflicting problems arise, the two will go their separate ways.

"We hope to work with these people and we understand they expect to work with us," was the only statement forthcoming from the offices of the ATA after the June 16 meeting. It was explained that ATA officials have from time to time recognized the inability of the organization to adequately express the wishes of the private carriers in the face of what Mr. Winchester described at the May 3 meeting of trade associations representatives as "a great deal of resistance" from the private carriers.

Although the committee did not elaborate on what it called "the growing need" for the organization it is sponsoring, it was understood the conferees, before announcing their statement of policy, heard new reports that an increasing brood of regulations is being hatched daily, and that maintaining a fleet of trucks as an incidental part of an established business carries implications far beyond the simple job of registering a motor truck.

The Texas law, under which a lumber company was held to be a contract carrier because it imposed a service charge on a load carried by a company truck, was cited, in illustrating the growing trend. Also discussed was the Nebraska law under which the State's regulatory body has moved to cover distributors and manufacturers and subject them to motor carrier regulations as were most of the other states whose regulatory functions control size, weight, and safety precautions of the country's private carriers who regard their trucks as a utility rather than a carrier.

Federal regulation entered the picture conspicuously when members of the committee were told that strong pressure is being brought to bear on the ICC to exercise its full powers over private carriers—a step which carries greater implications in view of the Commission's statements claiming jurisdiction over carriers even though their physical operations may not cross state lines.

While the plans of the sub-committee are tentative and will not be made public until after their submission and acceptance by the full committee, it is expected they will follow along certain general lines. For example, the organization, which plans to establish a Washington office, is expected to solicit the aid of trade associations in clearing through their offices in the various states for the initial drive. Testing the pulse of private carrier groups to learn the extent of their interest in the movement and the financial support which can be counted on is the key task that lies ahead for the organization.

After such matters have been settled, it is understood the program will go forward along these lines: A parent organization of trade association and farm group representatives, a purely voluntary set-up, would have a paid Washington representative or executive secretary whose job would be to make presentations before the ICC, survey national legislative proposals affecting private carriers, cooperate with the National Highway Users Conference and the ATA, and broadcast information to members throughout the country.

State organizations would have similar duties confined, of course, to the problems immediately affecting private carriers within their borders. These also would start on a purely voluntary basis, but after development would eventually work directly with the national headquarters in Washington, taking on a paid secretary to actively participate in functions affecting the carriers it represents.

The members of the committee include, in addition to those named to the sub-committee, the following:

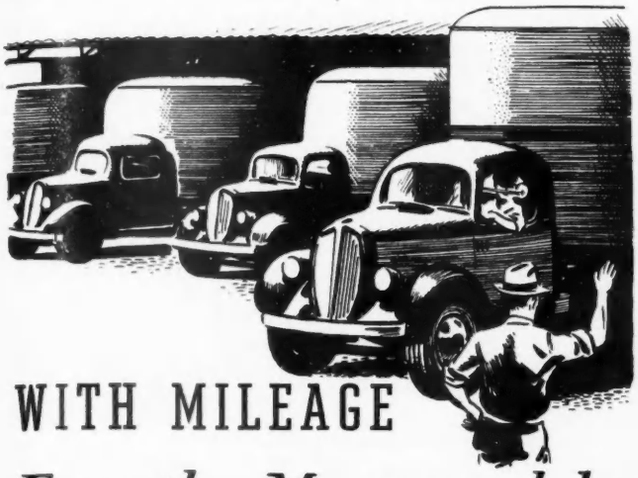
Fred Brenckman, Washington representative of the National Grange; P. H. Ducker, of the Los Angeles, Calif., Automotive Council; Robert C. Hibben, of the International Association of Ice Cream Manufacturers who was the first chairman of the committee; O. M. Kile, Washington representative of the Mail Order Association of America; F. E. Molling, of Denver, Colo., of the American National Live Stock Assn., and Emory C. Rice, of Baltimore, the American Bakers Association, who was represented at the meeting by J. P. Pymer.

R. J. O'Hare, of the International Association of Milk Dealers, was named chairman of the committee to succeed Mr. Hibben.

Supercharger for Ford V-8

The McCulloch Engineering Co. is manufacturing a supercharger for Ford V-8 engines. It is a fan driven centrifugal type unit with all bearings pressure lubricated from the engine without external oil lines. The power increase claimed is 38 per cent or to 124 h.p. The kit includes all parts necessary for dual exhaust outlets so that there will be no back pressure.

The Fleet's In . . .



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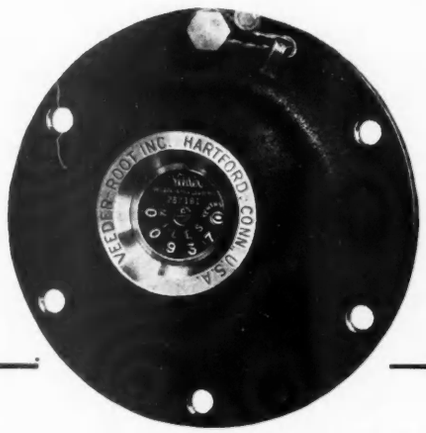

Every mile traveled by every truck—forward and backward—is accurately clocked by a *triple-sealed* Hub Odometer, right down to the last tenth. These records enable the fleet operator to spot—and take advantage of—any chance to save on gas, oil, tires, repairs.

These rugged, permanently reliable instruments are factory-adjusted to check to 1/10" with all changes in wheel and tire dimensions. They're sealed externally to resist and reveal any attempt to tamper. And they're double-sealed *internally* . . . against dirt from the road . . . against axle grease from the hub. Fleet owners all over the country have been helped to worthwhile savings by Veeder-Root Hub Odometers. *Find out how they can help you.*

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VEEDER-ROOT Inc.

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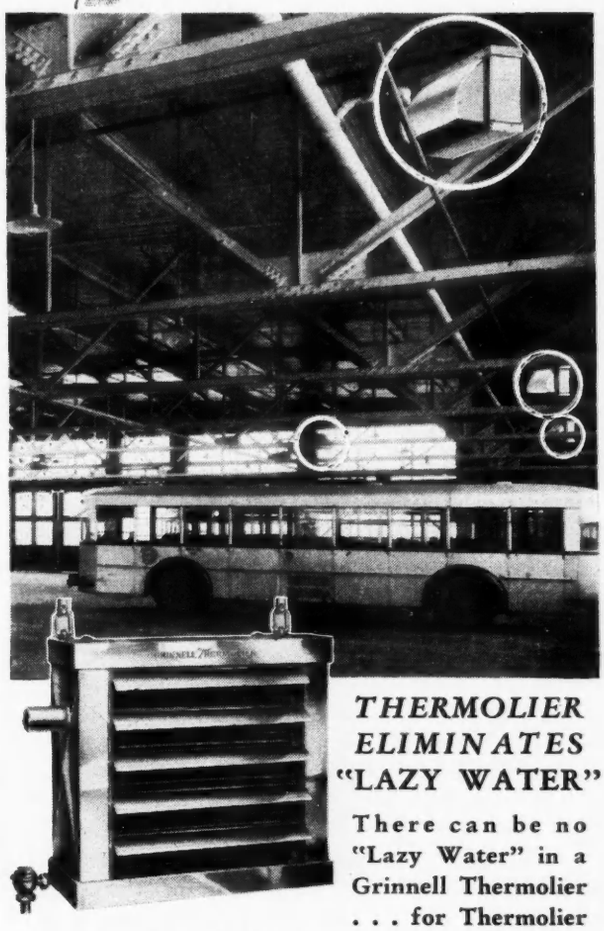
Doesn't Belong In Gas Lines . . . or

UNIT HEATERS!

Water in a gas line is a nuisance . . . and "Lazy Water" in your unit heaters causes trouble, too . . . cutting down heating surface, causing pounding and hammering . . .



THERMOLIER ELIMINATES "LAZY WATER"

There can be no "Lazy Water" in a Grinnell Thermolier . . . for Thermolier has the exclusive Internal Cooling Leg that *continuously* drains condensed steam . . . keeps *all* of the heater working, *all* of the time.

SUMMER'S THE TIME

Now is the time to think about heating your garage and shop next winter. Now is the time to learn how Unit Heaters distribute warm air down to floors, into corners . . . and how Thermolier's 14 points of superiority go every other Unit Heater "one better." The facts are yours — send for the Thermolier Data Book. Grinnell Co., Inc., Executive offices, Providence, R. I., Branch offices in principal cities of the U. S. and Canada.

GRINNELL THERMOLIER

THE UNIT HEATER WITH 14 POINTS OF SUPERIORITY

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PULL OVER, YOU

(CONTINUED FROM PAGE 31)

excessive dangerous speed. They don't crowd the automobilist off the road. Those truckers' families depend on them to make their bread. Wrecks are expensive. In my opinion, the truckers are the ones that give the extra inch of highway in a tight pinch.

I also know that a 13,000-lb. loaded truck is more maneuverable at 40 than at 25 miles an hour. But the Department of Public Safety wants safe highways—so they slap a 25 mile-an-hour speed limit on commercial trucks. I hate to think of all the business I would lose if I held my trucks down to that speed for just one trip. And what woman customer will buy stale and spoiled vegetables?

Matches Essential Too

"Well, they stuck one of the Trans-Valley drivers," a voice stated, emerging into the circle, "the cops are inspecting the flares, too."

"In that case," I said, "you boys had better go in the cafe and get a pocket full of matches, if you don't already have some."

Two or three drivers inquired. "What's the idea?"

"Well, I'll tell you. It seems as if the cops are fining truckers for not carrying matches in their pockets these days. I saw one of them do just that.

"About a week ago I was coming back from Fort Worth and stopped at Abilene for a cup of coffee. I met Gus Markham just as he started to pull out. I was standing talking to him when a cop came up and joined the conversation. He asked about our flares. We told him we had them and that they were full of kerosene. The cop stood around a few minutes, then pulled out a cigarette and asked Gus for a light. Gus didn't have a match in his pocket. The cop asked him if he had some in the truck. Well, Gus didn't. The cop fined him $27.50 for not having anything to light the flares with."

"Well, if that doesn't beat all. Why, the dirty so-and-so." This from half dozen voices at once. "Why didn't Gus fight the case?"

That question didn't need to be answered. We all know what happens when a driver tries to fight a fine. Lawyers' fees and the time lost cost more than the original fine. In the long run it is better to go ahead and pay the fine. That is, unless a person is satisfied with a moral victory. But truckers and their families can't eat a moral victory.

Truckers don't berate the flare requirement law. They know that flares are undoubtedly necessary to a stalled truck parked on the side of the highway at night. The law says that there must be three kerosene and wick burners placed in front, at the side and behind a truck that is to be stopped on the road for more than fifteen minutes. But, fining a man for not having a match in his pocket is just an exaggeration of that law. And in my opinion, cars need the flares as much as the trucks.

One thing we drivers have learned to do is this. When a cop says he is going to fine one of us, we immediately demand to be taken before a justice of the peace, we don't pay the cop personally. Highway officers don't make their extra change this way as much as they used to. The fact is, they rarely ever do it any more. But there have been cases of fines paid to the cop personally and the money never reached the justice of the peace office.

"Why didn't some driver going in for a load warn us about this 'session' tonight?" someone asked.

The truckers who make this run regularly know the answer to this question. "What would be the use? There are no roads around this town. You would have had to stop outside of town and wait until they stopped weighing. I don't know about you, but I would get fired if I brought this load in late. Besides that, the grocery stores I deliver to raise hell when their produce is late. Or you would have to load out light, minus a profitable load."

A paid driver for a produce trucking outfit answered that query. That is just about the fact of it, too. The grocery stores want their produce early in the mornings. Because that is the time most of their vegetable sales are made. I stopped once and waited for the cops to quit weighing when I first began trucking. But only once—I lost the produce run for a big grocery store in Odessa as the result. The manager didn't want produce 10 hours late.

I said to the circle of truckers, feeling pretty small, "I knew about this 'session' last night. I told all the boys I found in El Paso about it. They are behind me. You fellows left out before I could get a chance to tell you. I'm sorry, fellows; next time I'll 'phone in ahead and warn you."

In the larger produce towns such as San Antonio, truckers have meeting places, generally some large produce commission house or a cafe, to look for information concerning the possibility of a "session" to be held up the road. Service station owners and attendants 'phone in to the meeting places and the truckers pass the word around. In exchange for this service, truckers usually stop and trade with those helpful people.

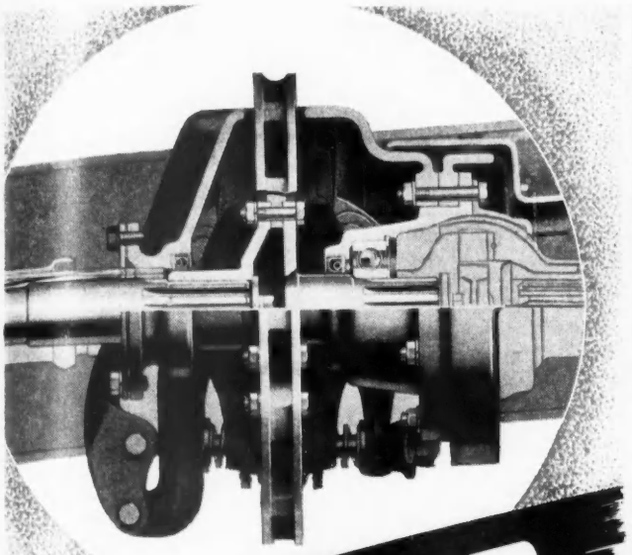
Of course, when we see a driver of an incoming empty truck holding two fingers out the window at us, we know to expect cops and a "session" up the road a few miles. And if it is possible, we take a detour around the next few towns. We lose time and it's more work, but at least we save the price of a fine for a few hundred pounds over the load limit. The few hundred pounds that means profit or loss to Texas truckers.

Part of the circle had melted away by this time. Their trucks had been weighed and they were headed on down the road, probably breaking the speed law—trying to make up for the time lost in the "session." Sure, they were breaking the law intentionally and wilfully, but bosses and produce managers won't take explanations about cops, "sessions," motor trouble, blowouts or time to eat a sandwich and swallow a cup of coffee; all they are interested in is getting their produce on time.

I looked around. There were only two trucks left in front of mine. Bud Thompson, who owned and ramrodded a fleet of four produce trucks working out of San Angelo, came up to me and said, "Well, my two trucks are all right. One of them was 'over' 200 pounds; they let it pass but said if they caught me 'over' again they would fine me double." He looked troubled and worried as he kept talking.

Profits Plenty Slim

"John," he said, "you have five of the best trucks on the road. Do you make any money? I'm just barely breaking even with my trucks on



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the road night and day. I have plenty of hauling, but damn it, I can't make any profit by keeping inside the law carrying only 7000 lb. a trip. I wish there was something we could do about that law." He looked at me hopefully.

It's true that I have five of the best trucks in West Texas. And I have a regular produce run for six of the largest and best grocery stores in five towns, with my headquarters in Midland. I don't have to worry if I can sell a load of produce to a store after I have bought it and hauled it several hundreds of miles. I realize that I have a little better set-up than most of the truckers of West Texas, but I also know that I am making just a bare profit with all my five trucks, and I don't know how much longer I can keep operating with the present set-up.

"I can't do anything about it, Bud, but there is something being done about it," I told him.

This is a fact. The Texas Truckers' Association, a free association composed of voluntary truckers in Texas, is working through the cooperation of Chamber of Commerce committees of many towns and cities to make an issue of the 7000-lb. load limit in the state legislature. Newspapers are taking up the fight. Bulletins showing why the law should be repealed or at least be amended are being circulated to the voters of Texas. In the near future, the association hopes the limit will be raised to at least 10,000 lb. Few of the surrounding states have load limits that low. Ten thousand pounds is only 3000 b. more than 7000, but even at that it would be a godsend.

I told Bud about the association's proposed movement. He said, "Well, I hope they succeed soon, because if they don't, I won't be in the trucking business very much longer." Just then a cop shouted at me:

"Hey, Pal, come on and roll your truck on the scales."

I told Bud "so long" and said, "I'll see you next trip. In the meantime don't let any cops slip up behind you." He got in the truck he was driving, nodded at the driver in his other and pulled out.

I rolled my truck on the scales and fretted impatiently while a cop looked at my empty-weight license, chauffeur's license and at the same time asked me questions.

It was old stuff to me and again just suspicious routine to him. All this happened at least three times a month. The scale man and the cop that questioned me put their figures together and after devious calculations decided I wasn't overloaded. The cop came back up to the cab window.

"O. K., Pal, you're not 'over' this time; you can go ahead."

"Sure, Pal," I said, "see you next trip." I pulled out and headed down the road thinking of the lost hour and a half.

I picked up speed and shifted into high gear, thinking hard . . . wondering how many times and how many places in the state of Texas that "session" scene had been enacted tonight . . . wondering how many other truckers had been fined more than a trip's profits for being over the load limit five or six hundred pounds . . . wondering how many truck owners were hoping for a quick amendment to the load limit law and subsequent raising of the limit before they were forced out of the trucking business.

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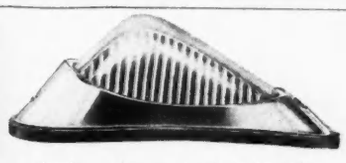
Save Half the Drain on Your Battery with this new STREAMLINER ALL PURPOSE LAMP



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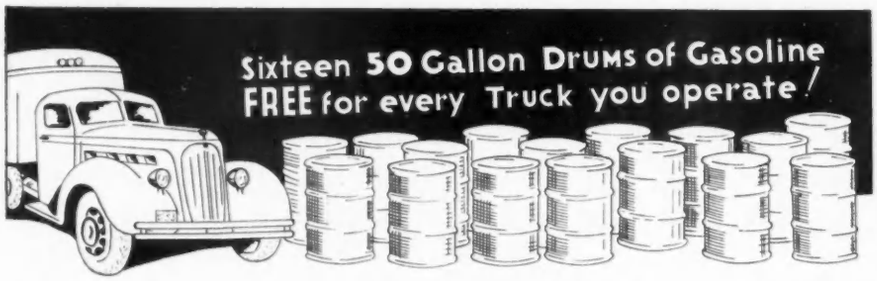

That's 800 gallons in all . . . enough to take a truck all the way across the United States . . . and a good part of the way back again! The saving that you can make each year in material, labor, and unproductive time by using MAGNUSOL for a large part of your cleaning purposes will enable you to buy that much gasoline for every truck you operate!

MAGNUSOL is the perfect motor and chassis cleaner for truck fleet owners. It takes the "cling" out of grease and oil . . . cleans thoroughly, quickly and safely. Cuts oil, dirt, smoke and traffic film from exterior surfaces. Prepares undergear for inspection with minimum lost time by separating all grease and dirt from exposed surfaces. Eliminates laborious scraping, soaking and scrubbing of cement floors. Harmless to use . . . non-flammable. And, in addition, it is also an ideal COLD tank cleaner . . . no more need for heat on your parts cleaning jobs!

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MAGNUS CLEANERS

TRUCKIN'

(CONTINUED FROM PAGE 33)

in this supply? Well, let's get back to the record.

In 1936, New York City consumed 1,363,938,800 qt. of milk and cream. Out of this total, New York State supplied 900 million quarts, Pennsylvania supplied 250 million and New Jersey, 130 million. Ever since their inception, the railroads have been the main conveyors of milk; but in 1936, 500 million quarts of milk and cream—almost half the amount delivered by the railroads, arrived via motor units for house-to-house distribution.

Every day a total of about 25 carloads of live and dressed poultry is accounted for at the West 60th St. yards of the New York Central. This foodstuff has been sent from New York State, Massachusetts, Connecticut and Vermont. In 1936, out of the 25 carloads, eight carloads, at least, arrived by motor truck, and this is not the whole story. Sixty per cent of the dressed poultry that arrives in New York City each day is consigned to cold storage. Therefore trucks—and lots of 'em.

No one needs to be told about the possibilities of meat spoilage. New Yorkers consume over a billion and half tons of meat a year sent East by Western and Middle Western States. While the railroads convey to depots, the trucks are invaluable for rapid transfer to wholesale dressed meat distributing centers and cold storage plants.

Five hundred million pounds of fish were consumed in the five boroughs that constitute New York City. Trawlers and fishing schooners, however, accounted for only about 250 million pounds of the fish. The balance of the tonnage was made up by trucks that, loaded with their ice-packed boxes of fresh and salt water fish, arrived direct from New England and the South; while still other motor units carted an aggregate of nearly 100 million pounds, and had their loads transferred to them after the cargo has been hauled by rail from as far away as the Great Lakes, Manitoba and British Columbia.

Increasing tendencies in exclusive motor transportation in the delivery of fresh fruits and vegetables are seen in the figures supplied by the

Atlas Lathe Catalog

Two new small Atlas backgeared screw-cutting lathes, swinging diameters up to 6 in., are the subject of Catalog 29 released recently by Atlas Press Co. Dept. 7, Kalamazoo, Michigan.

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Be sure of maximum returns on investment. Select Sterling motor trucks for superior performance and lower operating costs. Write for full information.

STERLING MOTORS CORPORATION
MILWAUKEE WISCONSIN

SHOP HINTS

(CONTINUED FROM PAGE 25)

nect the two fittings with a length of tubing. It may be necessary to correct the idle setting slightly depending upon whether the fitting is installed above or below the butterfly.

6. Shop Reamer

By Greaves Morris

Bellefonte, Pa.

I had the job of rebuilding a packless water pump, but lacked the necessary reamer. I took the old shaft which showed no wear at the pulley end and sawed a slot parallel with the shaft ½ in. long and ⅛ in. deep. Then by relieving one side of the slot with the emery wheel I had a reamer set to exact size. Since that time I have worked variations of the idea by using old shackle bolts to ream new bushings. Sometimes the threaded ends will engage even providing a feed for the reamer.

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Department of Markets of the City of New York. In 1935, perishables in the form of apples, grapes, lemons, oranges, watermelons, pears and plums and originating in New York State, Virginia, North and South Carolina, Florida and Georgia, were carted to the tune of 146,209 carloads by the railroads. That year the total for motor units was 65,259 carloads. In 1936, identical perishables from the sources as given, saw the railroads aggregating only 139,938 carloads; whereas the tonnage for the trucks rose to 71,183 carloads. No figures are available for vegetables alone inasmuch as Federal, State and City authorities group both fruits and vegetables together in computations.

The Farmers' Square Market in New York City, recently remodeled and enlarged by the Department of Markets, allows for the accommodation of about 1200 trucks and makes possible a steady, seasonal supply of fresh fruits and vegetables that, otherwise, might not be obtained.

This whole discussion of food supply and motor transportation hinges on flexibility, the mobility of motor units. To be specific:

Out of a total annual receipt of 244,299,056 lb. of butter in 1936, 50,822,071 were consigned to cold storage. Out of 6,441,529 cases of eggs, 2,536,754 were consigned; and out of 65,886,718 lb. of cheese, 22,861,120 lb. had to be sent to storage. For a figure of 212,096,792 lb. of poultry, 119,570,283 lb., more than half, went into reserve.

The size of New York's truck population can be measured by a simple comparison. In 1936, 113,169 commercial vehicles were registered in New York City alone; while for the entire state the sum was 325,721 and for the United States it was 4,023,606.

Approximately 48,000 trucks enter New York City every day, according to estimates furnished by the Port of New York Authority. Trucks pour out of the Holland Tunnel, off ferries, down from Westchester, Long Island and New Jersey, and out of the recently opened Lincoln Tube. New York City is served by more than 7000 merchant truckers, 82 per cent of which operate only one vehicle; 10 per cent, two vehicles, and 1.3 per cent over ten vehicles. They showed a total volume of about 1,000,500,000 tons a year. On an

(Turn to Page 83, Please)

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WELD
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In Less Than
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WONDER WELD is *guaranteed* to repair cracked valve ports, cylinder cracks as well as cracked water jackets. Works effectively on both aluminum and cast iron. Follow the directions on the can and insist upon Genuine WONDER WELD—you'll know it by its orange and black container.
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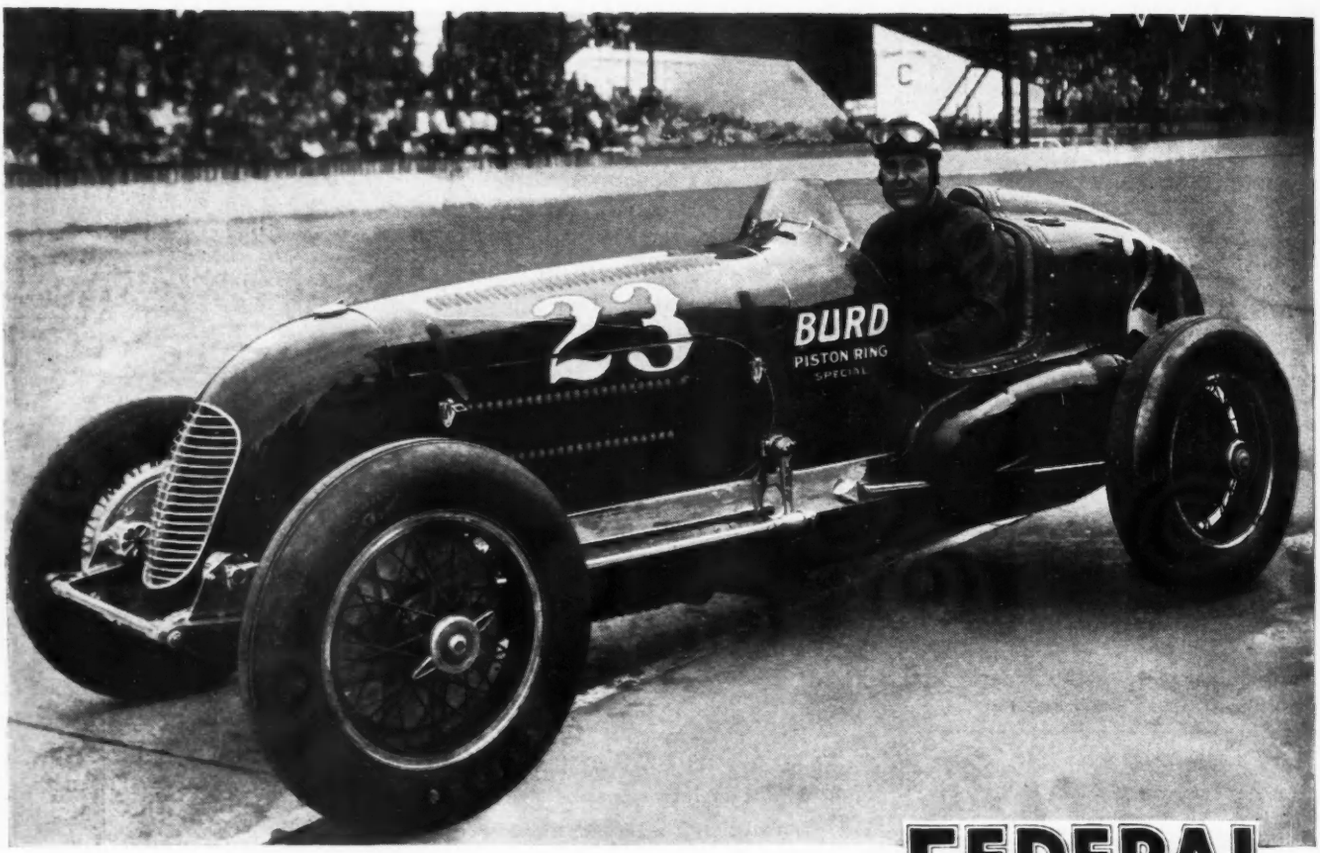

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117.2 m.p.h. . . . a new record speed over 500 miles of the toughest race in America—and the winner used bearings babbitted by Federal-Mogul. The steady grind of high-speed, high-temperature operation "shows up" bearing quality, and **again** Federal-Mogul bearing alloys proved best! Every Federal-Mogul engine bearing installation has this same enduring quality and performance!

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The winner says:

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"I am happy in the fact that as average speeds for this race increase each year Federal-Mogul can provide bearings which will endure the test of greater speeds."

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FEW MODELS ENGINEERED TO DO THE WORK OF MANY
HEIN-WERNER *hydraulic* **JACKS**

(CONTINUED FROM PAGE 79)

estimate of about $2,500 income per unit operated in 1936, $25,000,000 was grossed by the truckers of Metropolitan New York—a sum that compares with $61,854,000 for the entire state and $530,860,000 for the United States, during the same period.

34 Big Timers in N. Y.

In a survey, conducted as of May 1, 1937, and undertaken by the Automobile Manufacturers Association, 149 big-truck fleets owned largely by private shippers were listed. Out of these 149 "big timers," 34, at least, were registered in the "miracle city," and one fleet, if we except the Bell Telephone Companies with 13,725 trucks, the Railway Express Agency with 9306 units, is the largest private fleet outfit in the world.

In order of size, here are a few of the other big fleet operators with headquarters in New York City:

Borden's Milk Co., 6706; Hertz Drivuself Stations, 1810; Jewel Tea Co., 1546; National Biscuit Co., 1475; The Cudahy Packing Co., 1262; Dugan Bros., Inc., 1225; United States Trucking Corp., 625 units and Brink's, Inc., with 484 trucks.

We have seen how motor trucks are important to New York City as a consuming center. What about the part trucks play in the productive end? Are they as equally important?

Mention was made of the 7000 merchant truckers in Greater New York. Operating mostly within a radius of 50 miles, these truckers feed the steamers and railroads and make possible shipments to all parts of the country and the world. But when it comes to a motor service that is concentrated and is more than a collateral arm of the railroads and steamers, the Railway Express Agency with its 9306 trucks, is something to write home about.

The Railway Express Agency offers a pick-up and delivery service that covers an area of 228 sq. miles, and roughly embraces all the boroughs of Greater New York, a portion of Queens, Hudson County, New Jersey, Jersey City, Weehawken, Union City, Babbitt and Edgewater.

Utilizing 1037 trucks in this area, it has divided the territory into nine districts, each district being governed by a supervisor who has the assistance of two or more inspectors. Of

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There is a St. Paul Hydraulic Hoist and Body for every model of truck.
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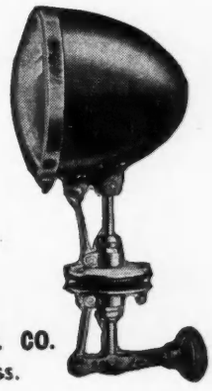
Type T
MASTER-LIGHT
for Truck Service



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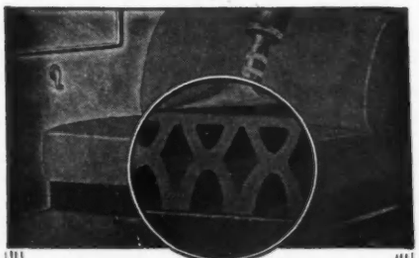

It has been years since Black Diamond became the number one all-rubber seat cushion and back rest. In that time experience has taught thousands of fleet owners that the best way to lick the seat cushion "bug-a-boo" is to equip with Black Diamonds. Experience has taught something else. It has taught fleet owners that for long life and economy they have no equal. That's due to their exclusive diamond grid construction that guarantees comfort and the elimination of upkeep and replacement expense. Available for any size or shaped cab. Write for details.

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MORE WASHING PROFITS

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SALES AND SERVICE IN ALL PRINCIPAL CITIES
FRUEHAUF TRAILER COMPANY
DETROIT

the 1037 units in service each day, 587 are gas, 160 using two men and 230 on double shift daily. Of 450 electric trucks, 291 are double-crewed and 21 double-shifted daily. An equivalent of 1739 eight-hour units is involved in operation within the New York territory, and the services of 2620 employes utilized.

On August 30, 1935, the last time of record, 209,674 New York City pieces passed through Railway Express facilities. This was augmented by 84,240 pieces of through bill matter, making a grand total of 293,914 pieces for the entire year of 1935—and we note that 1935 was not a peak period. A total of 33,143,601 shipments were either picked up or delivered in the New York City Department, and a total of 2,123 shipments, each moving under carload billing, were handled that year.

New York City has approximately 12 consolidators or packing concerns. It is these consolidators or packing concerns that forward merchandise to all parts of the country. In 1935, the Railway Express Agency alone averaged 3500 shipments from these concerns, the shipments, consisting of loads of about 14,000 pieces a day.

During the same year, a nationally-known retail store organization forwarded 449,630 pieces via Railway Express, representing a total weight of 5,809,767 lb., while one jewelry concern forwarded 81,230 pieces and a printing house made shipments in the neighborhood of 349,911 lb.

The United States Trucking Corp. with 625 units, exclusive of trailers, and a subsidiary, John J. Casale, Inc., with 318 more units, is worthy of attention. Divided into various divisions, the United States Trucking Corp. is credited with being the largest general trucking company in the world. Its general trucking division, its feeder service, and, especially, its armored car department, play very important parts in the transportation of merchandise and valuables of negotiable character.

The Howard Fast Express is an example of how insatiate is the "Wonder City's" need for trucks and more trucks. Only about six years old and servicing the garment industry mainly, The Howard Fast Express has a fleet of 65 dual six-wheelers and more units are contemplated. In six years as an interstate trucking organization, the

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Howard firm has established eight branches in five states and has built two main terminals, one of which is the largest of its kind.

Utilities Rely on Trucks

The story of New York City's reliance on motor transportation would not be complete without mention of its public utilities and the city's governmental departments.

Obvious are the implications of 13,725 motor trucks owned by the Bell Telephone Companies. There are 905,913 subscribers in Manhattan alone. The Borough of Bronx has 156,598; Brooklyn, 356,098; Queens, 181,147 and Staten Island, in the Borough of Richmond, 23,723. This takes into account only stations. Actual phones in use which must be serviced with wire, cables and switchboards may be close to 3,000,000 individual sets or pieces. Without the light, diminutive trucks built for speed and the heavy vehicles for tonnage, New York's telephone maze would defeat itself.

The Consolidated Edison, Inc., with its 956 trucks, among which are included emergency vehicles with pumps for asphyxiated persons, are located in stations only minutes away from any failure in light and heat. As for the Fire Department of New York City with its 624 units, and the Police Department with 115 "Black Marias" and 687 squad and detective cars—these must be their own commentary. Figuring also are 148 units of the Brooklyn Union Gas Company, a subsidiary of the Consolidated Edison, and the Department of Water, Gas & Electric with 344 trucks, responsible for the water supply of ten million people and co-operating with the public utilities.

Special mention must be made of New York City's Department of Sanitation. Operating 1045 flushing machines, 3821 ash trucks and 272 sanding machines, this Department collected more than 18 billion cubic yards of waste material in 140 working days in 1936, and that same year, flushing machines swept 2,736,000,200 sq. yd. of streets clean; snow removal apparatus, mounted on movable units, evacuating 57,755,155 yd. of snow.

So there we have it! New York City may have many reasons for its distinction and prowess. One thing is certain, it cannot omit motor transportation in final calculations.

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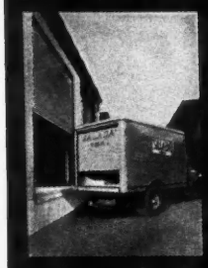
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